MCRP 3-11.1A

Commander's Tactical Handbook

U.S. Marine Corps

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FOREWORD

Marine Corps Reference Publication (MCRP) 3-11.1A, *Commander's Tactical Handbook*, contains reference material frequently used to organize, plan, and conduct Marine ground combat operations. Its intent is to assist small unit leaders functioning at the company level and below, but it also serves as a field reference guide for all Marine leaders. Leaders of combat support and combat service support organizations should familiarize themselves with the contents of this publication to understand the operational support requirements discussed. When applying the information contained in this publication, leaders must remember to—

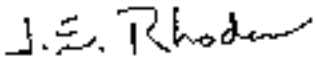
- Make their orders concise, clear, and simple.
- Give subordinates a thorough understanding of the intent.
- Explain the mission and the immediate commander's concept of operations.
- Give subordinates their mission (task[s] and unifying purpose).
- Integrate subordinate elements in coordinated action.
- Allow subordinates freedom of action consistent with the need for coordination. Do not issue detailed instructions covering every possible contingency.

- Conduct a complete estimate of each situation and develop a plan that supports success. Do not narrow the scope to only the information presented in this publication. Remember, the information presented in this publication is only a guide.

MCRP 3-11.1A is intended to be a handy compilation of important tactical information presented in loose-leaf format to better facilitate its use. It is based on information contained in numerous Marine Corps doctrinal publications. However, MCRP 3-11.1A does not supersede or replace a doctrinal publication. For detailed explanations on the tactics, techniques, and procedures found in this publication, see Marine Corps Warfighting Publication (MCWP) 3-11.1, *Marine Rifle Company* (under development), or the appropriate warfighting publication.

Reviewed and approved this date.

BY DIRECTION OF THE COMMANDANT OF THE MARINE CORPS



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COMMANDER'S TACTICAL HANDBOOK

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TROOP-LEADING STEPS

1. Begin Planning.

a. Plan the use of available time.

b. Estimate the situation based on mission, enemy, terrain and weather, troops and support available-time available (METT-T).

(1) Mission. The mission must identify—

- Task assigned.
- Who, what, where, and when.
- Commander's intent (why).

(2) Enemy. Commanders—

- Estimate the enemy's composition and disposition based on size, activity, location, unit, time, and equipment (SALUTE), and strength.
- Estimate the enemy's capabilities and limitations to defend, reinforce, attack, withdraw, and delay (DRAW-D).
- Estimate the enemy's most probable course of action.
- Identify vulnerabilities that can be exploited.

(3) Terrain and weather are evaluated based on key terrain, observation and fields of fire, cover and concealment, obstacles, avenues of approach, and weather/astrological data (KOCOA-W).

(4) Troops and support available are evaluated based on the following:

- People.
- Human factors.
- Equipment.
- Logistics.
- Fire support.
- Space.

(5) Available time. Commanders use the following to plan available time:

- 1/3 - 2/3 rule (allocate 2/3 of available time for subordinates).
- Backward planning.
- Parallel and concurrent planning.

c. Issue warning order.

2. Arrange.

a. Movement of unit (where, when, and how).
b. Reconnaissance.

(1) Select route, personnel, and use of subordinates.

(2) Determine method (e.g., route, aerial, map, vantage point).

c. Issue of order (notify subordinate leaders of time and place).

d. Coordination (adjacent and supporting units).

3. Make Reconnaissance.

a. Update METT-T.

b. Develop enemy's most probable course of action.

c. Confirm enemy's vulnerabilities.

4. Complete Plan.

a. Remember the concept of operations is driven by METT-T with an emphasis on mission (including intent) and the enemy's most probable course of action.

b. Develop scheme of maneuver to exploit enemy's vulnerability by placing him in a dilemma.

5. Issue Order.

Use the Five-Paragraph Order Format on page 5 (address the vantage point, use terrain modeling, use overlays, etc., if applicable).

6. Supervise.

Use brief backs, rehearsals, inspections, etc.

FIVE-PARAGRAPH ORDER FORMAT FOR COMPANY-LEVEL OPERATIONS

A map and/or terrain model orientation is normally given prior to issuing the order.

1. Situation.

a. Friendly forces.

(1) Higher unit mission (task and commander's intent).

(2) Adjacent unit missions (task and intent).

(a) Left.

(b) Front.

(c) Right.

(d) Rear.

(3) Supporting unit missions (task and intent).

b. Enemy forces.

(1) Composition, disposition, and strength is based on size, activity, location, unit, time, and equipment (SALUTE).

(2) Capabilities and limitations to defend, reinforce, attack, withdraw, and delay (DRAW-D).

(3) Enemy's most probable course of action.

c. Attachments and detachments (date and time effective).

2. Mission.

Task to be accomplished and purpose (who, what, when, where, and why).

3. Execution.

a. Commander's intent and concept of operations.
   (1) Commander's intent.
   (2) Concept of operations (scheme of maneuver and fire support plan).
b. Subordinate element missions (main effort, supporting efforts, and reserve).
c. Coordinating instructions (identify and discuss instructions that are common to two or more elements).

4. Administration and Logistics.

a. Administration.
b. Logistics (beans, bullets, bandages, bad guys, and batteries).

5. Command and Signal.

a. Signal.
b. Command.
   (1) Location of key leaders.
   (2) Chain of command (command succession).

Any questions? The time is now_____.

PART I

MANEUVER

"In tactics, the most important thing is not whether you go left or right, but why you go left or right."

General A. M. Gray
(MCDP 1-3, *Tactics*, p.1)

Property of the U.S. Marine Corps

Marines move out to take Japanese position.
(Tarawa, November 1943)

OFFENSIVE OPERATIONS

Attack Order General Coordinating Instructions

The following list identifies kinds of coordinating instructions that are common to two or more elements:

- Order of movement/formations for movement.
- Consolidation instructions: security, automatic weapons (see app. A), fields of fire, entrench (SAFE), and other measures.
- Displacement. Displacement instructions need to address—
  - Method.
  - Objective.
  - Route.
  - Time.
- Time of attack (crossing the line of departure).
- Main effort.
- Base unit.
- Tactical control measures (e.g., line of departure, assault position).
- Report of crossing phase line.
- Report of arrival at checkpoints.

- Actions upon contact. (See app. B.)
- Report of enemy activity immediately to commander.
- Preparations to continue the attack.
- Mission-oriented protective posture (MOPP) levels 0, 1, 2, 3, and 4. (See app. C.)
- Sleep plan.
- Rehearsal plan for the most critical to the least critical events and actions.
- Bump plan.
- Rules of engagement.
- Linkup plans.
- Other (as required).
- Timeline.

Movement to Contact

1. Contact Possibility.

a. Contact remote.

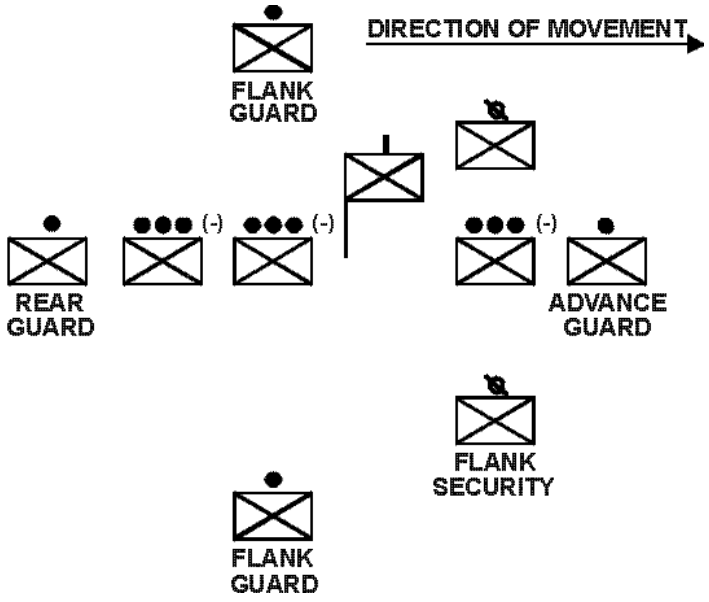
b. Contact possible/probable.

c. Contact imminent.

2. Formation.

a. Route column.

b. Tactical column.



c. Approach march.

3. Movement Considerations.

a. Speed characterizes bold and aggressive action.

b Security all around provides early warning (bump technique).

c. Flexibility and ease of control are consistent with expectation of enemy contact (leapfrog technique).

d. Use of connecting files.

e. Initial contact with the smallest unit; develop the situation.

4. Movement Techniques.

a. Traveling is used when—

- Speed is essential.
- Movement is easy to control.
- Enemy threat is remote.

b. Traveling overwatch is used when—

- Speed and security are equal.
- Movement is harder to control.
- Enemy threat is possible/probable.

c. Bounding overwatch is used when—

- Security is essential.
- Movement is hardest to control.
- Enemy threat is imminent.

5. Common Control Measures.

a. March objective.
b. Axis of advance or zone of action.
c. Phase lines.
d. Checkpoints.
e. Contact points.
f. Boundaries.

6. Combined-Arms Usage.

a. Designate planned, on-call targets for immediate suppression and for shifting during movement.
b. Use priority targets that can be activated/deactivated on order or by event.
c. Plan for flexible positioning of crew-served weapons within formation.

7. Miscellaneous.

a. Plan for all-purpose lightweight individual carrying equipment (ALICE) pack drop and retrieval during dismounted operations.
b. Plan and conduct extensive rehearsals (emphasis on immediate action drills/contact).
c. Plan communications with the point element and ensure that the signal plan facilitates action drills. (See app. D.)

Attack of a Fortified Position

1. Principles.

a. Suppress enemy observation points and frontline units.

b. Obscure enemy with smoke concentration.

c. Secure breach point and initial positions.

d. Reduce frontline positions, roll flanks, and rear areas.

2. Planning Considerations.

a. Provide a thorough intelligence brief on the enemy's location and capabilities.

b. Plan carefully when developing scheme of maneuver and fire support plan.

c. Plan aggressive individual and small-unit actions.

d. Plan effective control and coordination down to the lowest level.

e. Understand the scheme of maneuver and principles involved in the attack of a fortified position.

f. Consider conducting a clandestine breach.

3. Breaching Task Organization/Tasks.

a. Support elements may be located in multiple positions and—

- Support all phases of attack with fire.
- Cover, initially, a large part of the objective by fire.
- Concentrate fires in a narrow sector to allow assault/ breach element to seize initial enemy position.

b. Assault/breach element is an obstacle-clearing detachment that is made up of an infantry squad or platoon and an engineering detachment. It is normally the smallest element. It—
   - Breaches any obstacle in the path of an attacking unit.
   - Creates and defends the initial gap or opening in the enemy's defense.
   - Considers multiple or false breaches.

c. Penetration/exploitation element is the largest reinforced element. It—
   - Widens penetration of the enemy's position.
   - Continues the attack into the enemy's secondary defenses and rear areas.
   - Occupies key terrain (e.g., trench intersections, key bunkers).

Note: A unit can be assigned the mission of more than one element.

4. Special Equipment.

a. Demolitions (e.g., satchel charges, line charges, bangalore torpedoes).
b. Mine detectors, wire cutters, and grappling hooks.
c. Large quantities of rockets, hand grenades, and machine gun ammunition.
d. Flags to mark forward progress.
e. Flares/material to mark breach lanes.

5. Coordinating Instructions.

a. Method of marking cleared bunkers/trenches.

b. Reduction sequence and plan for destruction of bunkers.

6. Clearing Teams (fire team organization).

a. No. 1 is an automatic rifleman who suppresses each leg of the trench after No. 2 throws the grenade.

b. No. 2 assists the automatic rifleman by throwing the grenade and acting as a cover for No. 1.

c. No. 3 is a team leader who controls the team's clearing procedures and indirect suppressive fires.

d. No. 4 is a rifleman who provides rear security.

Mechanized Attack

1. Principles of Mechanized Operations.

a. Concentration.
b. Surprise.
c. Speed.
d. Flexibility.
e. Boldness.

2. Task Organization.

a. Assault element.
b. Support element.
c. Breach element.

3. Order of Movement.

a. Tanks lead in open areas or when faced with significant armor threat.
b. Mounted infantry leads are only used if mechanized infantry is pure with no other antiarmor reinforcements or capabilities.
c. Dismounted infantry leads when—
   - Terrain and vegetation are restrictive.
   - Visibility is poor.
   - Antitank guided missiles are a threat.
   - Significant obstacles or fortified positions are encountered.

4. Movement Techniques.

a. Traveling technique is used when—
   - Speed is essential.
   - Movement is easy to control.
   - Threat of enemy contact is remote.

b. Traveling overwatch is used when—
   - Speed and security are equal.
   - Movement is harder to control.
   - Threat of enemy contact is possible/probable (bump technique).

c. Bounding overwatch is used when—
   - Security is essential.
   - Movement is hardest to control.
   - Threat of enemy contact is imminent (leapfrog technique).

5. Combined-Arms.

a. Designate planned, on-call targets for immediate suppression and for shifting during movement.

b. Use priority target that can be activated/deactivated on order or by event.

c. Plan for the use of smoke to obscure dismount point and/or assault position.

d. Consider use of series targets for movement/attack.

e. Place enemy in a dilemma.

6. Coordinating Instructions.

a. Order of movement/formations for movement.

b. Consolidation instructions: security, automatic weapon, fields of fire, entrench (SAFE), and measures.

c. Displacement. Displacement instructions need to address—

- Method.
- Objective.
- Route.
- Time.

d. Time of attack (crossing the line of departure).

e. Main effort.

f. Base unit.

g. Tactical control measures (e.g., line of departure, assault position).

h. Report of crossing phase line.

i. Report of arrival at checkpoints.

j. Actions upon contact.

k. Report of enemy activity immediately to commander.

l. Preparations to continue the attack.

m. Mission-oriented protective posture (MOPP) levels 0, 1, 2, 3, and 4.

n. Sleep plan.

o. Rehearsal plan for the most critical to the least critical events/actions.

p. Bump plan.

q. Rules of engagement.

r. Linkup plans.
s. Other (as required).
t. Timeline.

7. Additional Instructions.

a. Actions on contact.
   (1) Contact from the front, rear, left, and right.
   (2) Actions against air, artillery, ground defense, etc.
b. Actions for hasty and in-stride breach.
   (1) Support force.
   (2) Breach force.
   (3) Assault force.
c. Alternate means of communication (e.g., hand and arm signals, pyrotechnics). Signal plan facilitates action drills.
d. March speed/maximum catch-up.
e. Distance between vehicles/distance between units.
f. Security for disabled vehicles during movement and during scheduled and unscheduled halts.
g. Technique of movement.
h. Antitank guided missile battle drill.
   (1) Designate priority targets.
   (2) Plan actions upon contact.
i. Dismount area.
j. Fire control measures (mechanized assets supporting a dismounted attack by fire).

Night Attack

1. Types.

a. Illuminated night attack principles are the same as a daylight attack.

b. Nonilluminated night attack uses stealth to achieve surprise.

c. Supported or nonsupported night attacks are selected based on the degree of surprise needed.

Note: Always plan for the use of supporting fires.

2. Nonilluminated, Nonsupported, Night Attack Principles.

a. Control (mark key leaders for easy identification).

b. Direction (use compasses and assault azimuth).

c. Surprise (quickly follow with bold, aggressive action).

3. Common Control Measures.

a. Point of departure.

b. Contact point.

c. Release points.

d. Probable line of deployment (PLD).

e. Routes.

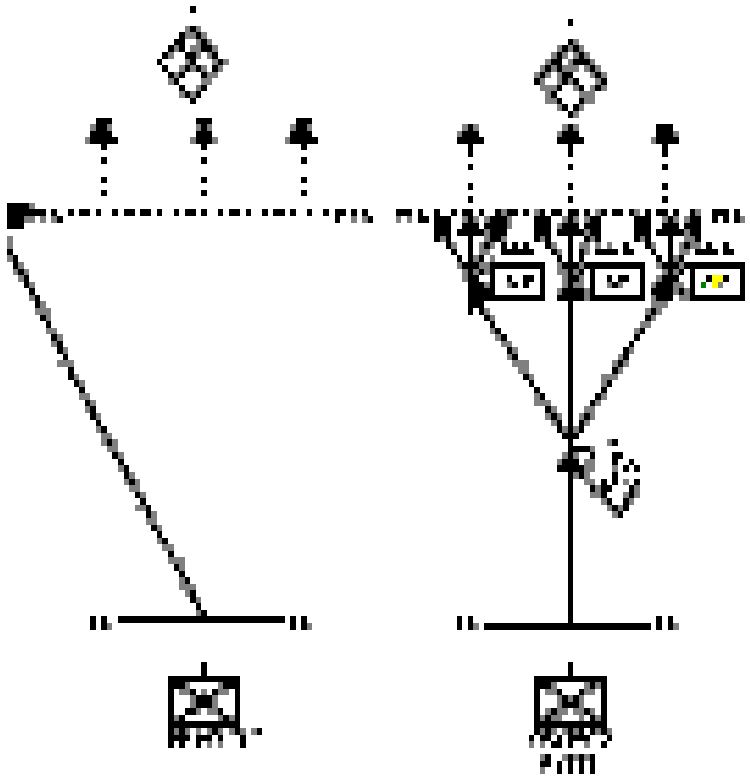
f. Limit of advance.

g. Time of attack.

4. Reconnaissance—PLD Patrol.

a. Gain detailed information on enemy and terrain.
b. Mark routes.
c. Provide guides for night attack force.
d. Maintain surveillance of the area of objective.
e. Establish PLD.

5. Techniques for Loading PLD.



6. General Considerations.

a. All units are physically tied in on the PLD.

b. PLD patrol is composed of Marines from each platoon.

c. Contingency plans for enemy contact are used—

- Prior to loading PLD.
- During deployment onto the PLD.
- If receiving sporadic fire from defensive lines or observation post/listening post.

d. Obstacle breach is planned.

e. Illumination plan is initiated on contact.

Helicopterborne Operations

1. Planning Considerations.

a. Determine the total number of aircraft available by consulting the forward air controller/air officer.

b. Determine the number and type of aircraft allocated to each wave by consulting with the forward air controller/air officer.

c. Determine the size of the landing zone and surrounding terrain/vegetation by using maps, photographs, reconnaissance, and intelligence reports.

d. Determine load plan per aircraft.

(1) Spread loading of the key personnel, weapons, and equipment.

(2) Establish a bump plan in case there are aircraft complications or changes.

e. Prepare and collect a manifest for each heliteam.

f. Determine the need for landing zone security (both pick-up and insert).

g. Plan for both primary and alternate landing zones. (Who has authority to change from primary to alternate?)

h. Mark landing zone (e.g., panels, smoke, NATO inverted Y). (See app. E.)

i. Use initial terminal guidance, if available.

2. Landing Considerations.

a. Leaders must orient themselves and the heliteam prior to the ramp going down (12 o'clock).

b. A rifle platoon is generally the smallest tactical unit to land in one wave.

c. The helicopterborne force lands prepared to fight in any direction.

d. Leaders must plan for security immediately upon landing.

e. Leaders establish unit sectors based on the clock method or key terrain objectives.

f. Leaders establish procedures/signals to prepare, load, orient, etc., upon landing.

g. Leaders designate guides for subsequent lifts.

3. Loading Considerations.

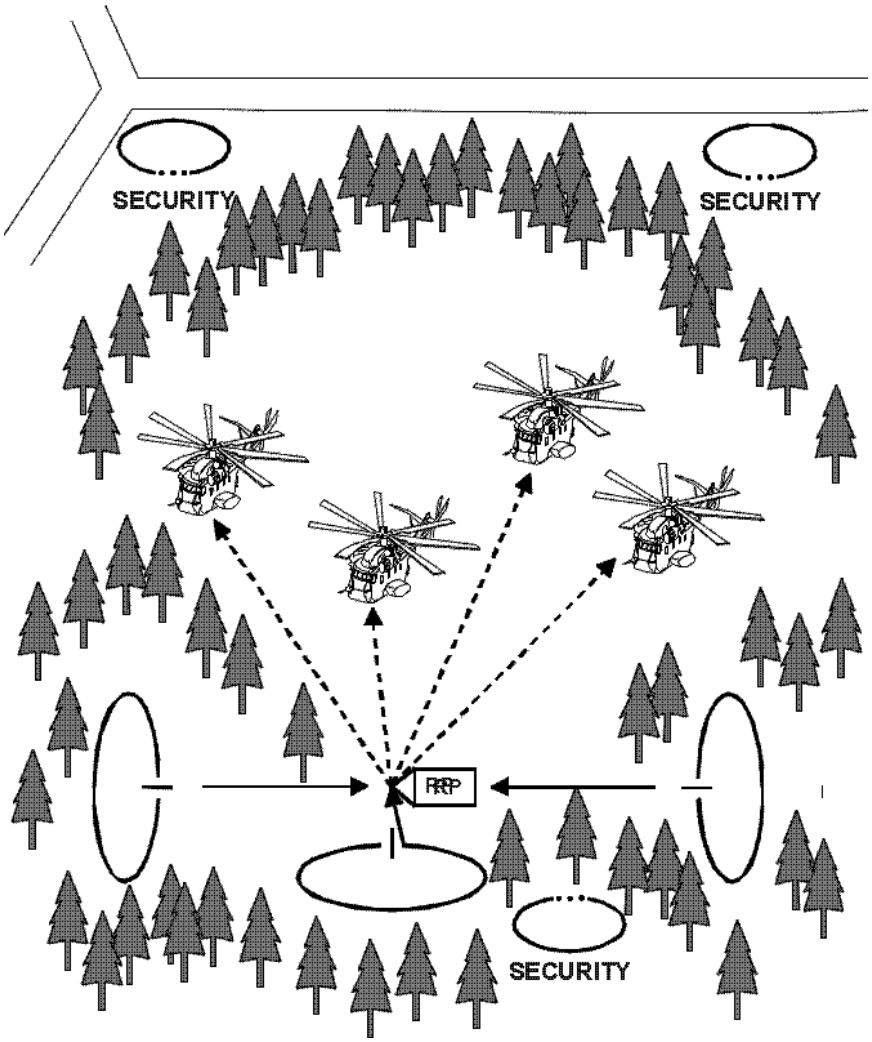
a. Secure a corner of a large landing zone with a part of the force (leave remainder in the assembly/holding area during embarkation and debarkation).

b. Secure the entire perimeter of a smaller landing zone during embarkation and debarkation.

c. Designate a pick-up zone control officer/marshalling area control officer.

d. Instruct the heliteams to head to the release point (holding area) and drop off the manifest. If manifest cards are collected prior to helicopter arrival, units may bypass the release point and, on signal, head directly for their assigned aircraft.

e. Extract the security unit last.


SECURITY
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SECURITY

4. General Considerations.

a. GO/NO GO criteria.

b. Downed helicopter procedures.

c. Evasion and escape (E&E) plan.

d. Search and rescue (SAR) plan/combat search and rescue (CSAR) plan/tactical recovery of aircraft and personnel (TRAP) plan.

e. Weapon carried muzzle down for CH-46s/53s and muzzle up for UH-1s.

f. Packs slung over one shoulder can be easily ditched if required.

g. Soft covers are removed when helicopters are inbound.

h. The heliteam leader/senior man uses, once inside the helicopter, an internal communications system (ICS) to coordinate and confirm route, landing plan, and landing zone with the helicopter pilot.

5. Common Control Measures.

a. Identify the marking colors of the assembly area, landing zone, pick-up zone, holding area, and landing site.

b. Identify and designate the number of release points and landing points required.

6. Common Helicopter Data.

	UH-1N	CH-46E	CH-53D	CH-53E
Normal troop capacity (peacetime)	6	12	18	18
Normal troop capacity (combat)	6	15-20	30	30
Maximum troop seating capacity	12	25	37 55[1]	37 55[1]
Litter capacity	6	15	24	24
Classification	utility light	medium	heavy	heavy
[1]Up to 55 seats (center line installation). The number of passengers (PAX) may be limited during training.				

Military Operations on Urbanized Terrain

1. Military Operations on Urbanized Terrain (MOUT) Phases of the Attack.

a. Reconnoiter the objective (reconnaissance and intelligence gathering to support planning).

b. Isolate the objective (a portion or the entire urban area).

c. Gain a foothold/establish a point of entry (rapid buildup of combat power).

d. Attack or clear the objective.

2. Platoon in the Attack.

a. Commander's plan ensures understanding and coordination (detailed centralized planning/decentralized execution).

b. Attack is heavily decentralized (initiative, adaptation, and small-unit leadership).

c. Buildings are attacked as if they were fortified positions.

d. Unit size is based on mission, enemy, terrain and weather, troops and support available-time available (METT-T).

e. Control is maintained between adjacent units.

f. Scheme of maneuver and fire support plan emphasize use of direct fire weapons in close support of assault.

g. Scheme of maneuver must provide for detailed, systematic, step-by-step reduction of all objectives assigned to the platoon.

h. Automatic weapons are assigned principal direction of fires on streets to isolate the enemy.

i. Assault is characterized by three steps.

(1) Isolate.

(2) Gain entry.

(3) Clear.

3. Coordinating Instructions.

a. Use phase lines, boundaries, checkpoints, etc., to aid in control.

b. Identify structures (and the order in which they will be attacked) by the number or letter.

c. Specify method for marking secured buildings so they can be identified by other friendlies.

d. Specify detailed actions of search team/cover team.

e. Establish casualty collection points, enemy prisoner of war collection points, and refugee control point.

f. Specify the method for marking individual Marines and entry points.

4. General Considerations.

a. Check all holes, doorways, and windows for booby traps prior to entering.

b. Enter buildings from the top if possible.

c. Breach/create ground floor entry by using demolition or direct fire weapons.

d. Ensure breakdown into clearing and covering teams.

e. Achieve fire superiority before attacking a building.

f. Maintain the principle of all-around security (consider the three-dimensional threat).

g. Conduct rehearsals and prepare standing operating procedures which are vital down to the smallest unit level.

h. Designate marksmen and use them.

i. Identify grenades by type and quantity, as well as issue safety instructions.

j. Consider the use of riot control agents if authorized.

k. Consider the use of smoke, backblast from weapons, etc., to cover movements across danger areas.

5. Organization.

a. Platoon level is organized into assault, support, and security forces.

   (1) Each force is normally based around a rifle squad.

   (2) Squads may be reinforced with crew-served weapons, forward observers, etc.

b. Squad level is organized into an assault force and support force and reinforced or task-organized as needed based on METT-T.

   (1) Assault force consists of one assault element, one security element, and one fire team for each element (two fire teams total).

(2) Support force consists of one fire team (may be rotated).

c. Fire team level, assault element is organized into two-man search and two-man cover teams.

Fundamentals of Securing a Room

1. General Considerations.

a. Dominate the room and approaches.
b. Employ speed, accuracy, violence of action, and momentum.
c. Conduct area searches to eliminate all threats.
d. Shoot threat targets, cover danger areas, protect each other.
e. Report the situation.
f. Continue attack or defend.

2. Basic Rules to Follow.

a. Follow safety rules.
b. Know your weapon's condition.
c. Move as fast as possible; however the ability to shoot accurately must be maintained.
d. Lead with head and eyes.
e. Move smoothly but quickly from covered position to covered position, remain low when stationary.
f. Concentrate on the front sight post (eyes, muzzle, target).
g. Follow through. Engage target until it is down.
h. Cover assigned sectors.
i. Maintain awareness (don't be startled).
j. Avoid speed reloading; keep track of your remaining ammunition.
k. Lead with physical aggression.

l. Clear constricted spaces from the outside.

m. Clear a corner before moving into it.

n. Never make entry alone.

o. Reload before all rounds are expended.

p. Normally assign at least one squad to clear a building (use mission, enemy, terrain and weather, troops and support available-time available [METT-T]).

q. Maintain three-dimensional security. Hallways are fatal funnels of fire.

r. Focus on hand-carried items and hand movements of occupants to determine if weapons are present and to react to hostile intent.

s. Communicate constantly with each other.

t. Keep off walls (12 to 18 inches).

Amphibious Helicopterborne Assault

The following coordinating instructions are common to two or more elements:

- Assembly area for loading.
- Heliteam wave and serial assignment table submitted by (time) and (location).
- Heliteams formed by (time) and (location).
- Tactical spread loading and bump plan.
- Manifest submitted by (time) and (location).
- Zone inspection, planning, preparing and operation (ZIPPO) brief at (time) and (location) given by (who) for (whom).
- Heliteam organization.
- Landing plan.
- Landing zone organization (flying out).
- Landing zone organization (flying in).
- L-hour.
- Portion of landing zone reported as secure.
- 12 o' clock is _____.
- Tentative extraction plan.

Amphibious Surface Assault

The following coordinating instructions are common to all elements:

- H-hour.
- L-hour.
- Staging areas/boat stations.
- Boat team organization, ensuring tactical spread loading and bump plan.
- Serial assignment tables submitted by (time) and (location).
- Manifest submitted by (time) and (location).
- Assault stage by (time) and (location).
- Boat teams formed by (time) and (location).
- Ship-to-shore movement.
- Landing plan.
- GO/NO GO criteria.

DEFENSIVE OPERATIONS

General Information

1. Characteristics.

a. Preparation. Leaders post local security to provide early warning.

b. Disruption of enemy attacks. Defensive operations aim to disrupt enemy attacks as far from friendly forces as possible.

c. Concentration of combat power. Leaders ensure that combat power is available at decisive time and place.

d. Flexibility. Forces maintain the ability to deal with a variety of enemy courses of action.

e. Use of terrain. Leaders control avenues of approach based on key terrain, observation and fields of fire, cover and concealment, obstacles, and avenues of approach (KOCOA).

f. Security. Forces use both active and passive measures.

g. Mutual support. Leaders position units so they can reinforce each other.

h. Defense in depth. A shallow defense is vulnerable to a concentrated attack.

i. Obstacle plan. A coordinated obstacle plan strengthens defensive operations.

j. Fire plan. Leaders coordinate and integrate direct/indirect fire plans with the scheme of maneuver and obstacle plans. (See app. F.)

2. Reconnaissance.

a. Issue warning order and plan leader's reconnaissance.

(1) Identify the type of reconnaissance plan (e.g., map, visual, helicopter).

(2) Identify the number of personnel and key personnel/ equipment participating in reconnaissance party.

(3) Identify security requirements.

(4) Identify leaders remaining with the company.

(5) Develop 5-point contingency plan.

b. Plan reconnaissance actions.

(1) Develop/confirm occupation plan (e.g., crow's foot, bent L).

(2) Confirm/deny possible enemy avenues of approach and courses of action.

(3) Designate fields of fire and dead space.

(4) Locate listening post (LP)/observation posts (OPs).

(5) Designate tentative primary, alternate, and supplementary positions.

(6) Confirm and develop tentative obstacles and fire support plans.

(7) Designate tentative locations for command posts; aid stations; nuclear, biological, and chemical evacuation stations; medical evacuation station landing zone; petroleum, oils, and lubricants; and logistics.

(8) Designate sectors of fire.

(9) Identify adjacent unit's positions and ensure that sectors of fire are mutually supporting.

(10) Establish security plan (OP/LP) and initial communications (wire) plan.

3. Final Planning Considerations.

a. Does the defensive plan—
   - Allow for flexibility?
   - Allow for proper use of terrain?
   - Provide for mutual support?
   - Provide adequate security measures?
   - Provide for enough depth?
   - Allow for planned use of reserve and/or counterattack?

b. Have adjacent units' positions, sectors of fire, etc., been confirmed?

c. Is defense from battle position or sector?

d. Which type of defense is planned, linear, reverse slope, or perimeter? Which defense best accomplishes the mission and uses the terrain to best advantage?

e. What are the positions of key weapon systems? Do they support the defensive plan? Are direct support/general support weapon systems within the position/sector efficiently secured by the infantry?

f. Does the fire support plan—
   - Support the defensive scheme of maneuver and security (patrolling) plans?
   - Cover the use of high explosives, smoke, and illumination?

g. Does the engineering plan—
   - Place the priority of effort on mobility, countermobility, or survivability?
   - Support the defensive scheme of maneuver and fire support plans?
   - Integrate with the engineering plan of adjacent units?
   - Provide for concealment of obstacles?
   - Provide for cover of obstacles by fire?

4. Battle Positions Versus Sector.

Considerations	Battle Position	Sectors
Avenues of approach	Well defined; enemy can be canalized	Not easily defined
Terrain	Dominates avenues of approach	Dominating terrain not available
Area of operation	Narrow/small	Wide/large
Mutual support	Achievable	Not easily achieved
Commander's ability to control	Good	Degraded

5. Defensive Types.

a. Perimeter.

b. Linear.

c. Reverse slope.

6. Conduct.

a. To prepare for combat, leaders—

- Receive the mission.
- Make tentative plans.
- Issue the warning order.

b. To prepare for reconnaissance missions, leaders—

- Confirm the enemy's probable avenue of approach.
- Identify dead space.
- Identify location for OPs/LPs.
- Identify location of primary, alternate, and supplementary positions for subunits and major weapons systems.

c. Once reconnaissance is completed, movement into the defense begins:

- OPs/LPs and guides may be left in position.
- Unit leaders complete and issue orders, conduct inspections, and conduct rehearsals.
- The company moves forward by unit or by platoon/section to occupy position.

d. Occupation of the defense.

(1) Prior to entrenching, leaders—

- Walk the defensive position to reexamine sectors of fire and to confirm the position.
- Establish face-to-face coordination with adjacent unit leaders.

(2) During occupation of positions, leaders—

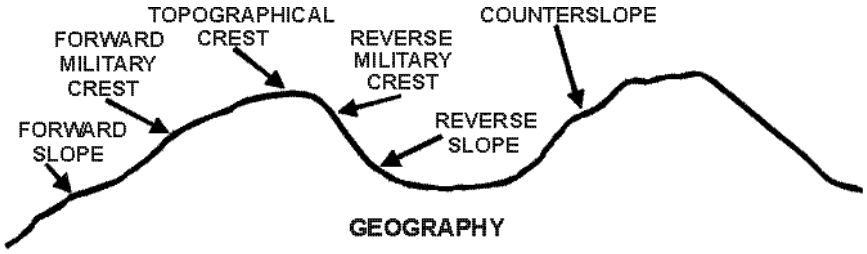
- Confirm sectors and check interlocking fires and dead space.
- Physically check and confirm positions of key weapons.
- Check range cards.
- Complete defense fire plan sketch and deliver to the next higher command.
- Look at weapons, positions, and obstacles from enemy point of view.
- Disseminate any information received.
- Ensure automatic weapons are integrated and protected with infantry.
- Check security and alert plan, patrol plan, radio watch, and logistics.
- Rehearse routes to and from alternate and/or supplementary positions.

(3) Based on mission, enemy, terrain and weather, troops and support available-time available (METT-T) and security, automatic weapon, fields of fire, entrench (SAFE), leaders—

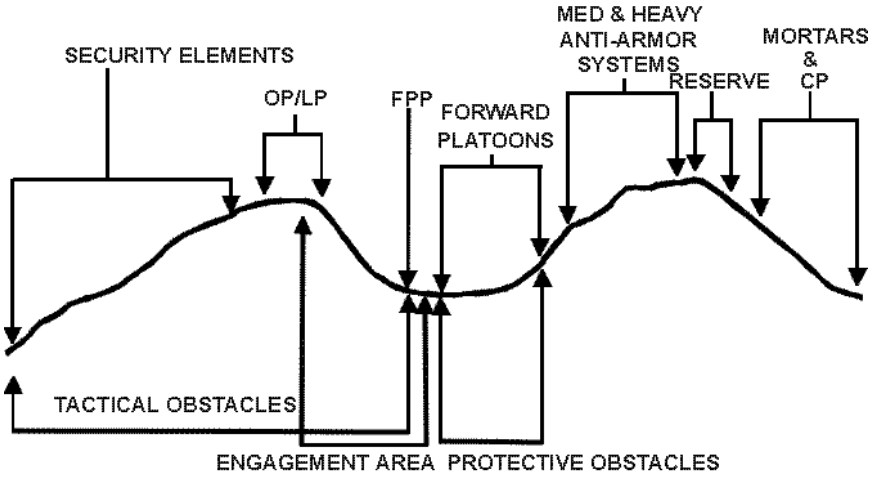
- Establish location security (OP/LP) and specify levels of alert.

- Position automatic weapons and assign their sectors to include the final protective line or principal direction of fire.
- Identify sectors of fire for all other weapons and emplace aiming stakes.
- Design primary positions and entrench.
- Establish and register final protective fires (mortars and artillery) to cover dead space.
- Clear fields of fire and begin entrenching.
- Prepare range cards and fire plan sketches. (See app. K.)
- Lay and bury communications wire.
- Emplace obstacles (e.g., wire, mines, booby traps).
- Mark target reference points (TRPs) and direct fire control measures.
- Prepare alternate and supplementary positions.
- Establish rest plan.
- Rehearse engagements.
- Stockpile ammunition, food, and water.

7. Reverse Slope Defense.



GEOGRAPHY



SAMPLE TACTICAL DISPOSITION

General Coordinating Instructions for Defense Orders

The following coordinating instructions are common to two or more elements:

- Movement into the defense (deliberate defense only).
- Location/grids for tactical and fire control measures (e.g., boundary, sectors of fire, target reference point, engagement area).
- Target precedence.
- Security plan (percent alert).
- Engagement and disengagement criteria and instructions.
- Rates of fire.
- Priority of work based on security, automatic weapons, fields of fire, entrench (SAFE).
- Reporting requirements.
- Mission-oriented protective posture (MOPP) levels 0, 1, 2, 3, and 4.
- Control of illumination.
- Stand-to commences (time) and ceases (time).
- Movement within position.
- Other.
- Timeline.

Reserve Considerations

1. General Considerations.

a. Commit enough combat power to be decisive at the critical point.

b. Consider that the smallest unit capable of creating a reserve is generally a company.

c. Prioritize missions for planning purposes (be prepared).

d. Assign positions near the most likely place of commitment.

e. Consider locating Reserve Force commander with a higher commander for better situational awareness.

2. Possible Missions.

a. Reinforce the main battle area.

b. Add depth to the defense.

c. Block or contain penetrations.

d. Protect flanks and rear areas.

e. Conduct a hasty counterattack.

f. Support the forward element by fire.

Counterattack Considerations

1. General Considerations.

a. Enemy's strength and mobility.

b. Initial disposition, assembly areas, coordination measures, and routes.

c. Coordination with frontline units.

d. Fire support plan.

e Communications/signals.

f. Rehearsals.

2. Types.

a. Planned counterattack—

- Uses a designated force (not part of the reserve).
- Is planned prior to battle and mission assigned to a sub-unit as an on-order mission.
- Is prepared, coordinated, and rehearsed in detail.
- Is issued as an attack plan with tentative objectives and direction of attack.
- Becomes the main effort once employed.

b. Hasty counterattack—

- Is a defensive measure that wasn't implemented in the commander's original scheme of maneuver.
- Tasks the least engaged unit if a reserve is not already assigned.
- Is normally assigned as a be-prepared mission or issued as a fragmentary order.

Defensive Military Operations on Urbanized Terrain

1. Principles.

a. Employ all-around defense and mutually supporting positions.

b. Establish three-dimensional security (above, below, and around).

c. Deny enemy freedom of movement (barricade avenues of approach).

2. Planning.

a. Leaders assign priorities of work in the defense based on mission, enemy, terrain and weather, troops and support available-time available (METT-T); security, automatic weapon, fields or fire, entrench (SAFE); and other considerations.

b. Leaders plan positions to achieve defense in depth.

c. Leaders plan and implement obstacle/barrier plan.

d. Leaders determine the priority of buildings/areas to defend.

e. Leaders generally assign one platoon (based on METT-T) to defend one block or one large building.

3. General Considerations.

a. Position security high for best observation and survivability.

b. Employ automatic weapons at ground level and antiaircraft at higher level for effectiveness.

c. Anticipate the special considerations required when using weapons with back blast.

d. Construct firing ports and barricades in and around positions.

e. Rehearse contingencies for moving within and around positions.

f. Construct cover using, preferably, reinforced concrete or brick. Improve cover with sandbags or ammunition cans filled with dirt or debris.

g. Select observation positions that, at a minimum, permit observation of the adjacent unit's sector.

h. Conceal firing positions back and away from windows and doors. Wet down areas around weapons to prevent dust signatures when firing.

i. Select fields of fire and positions that are mutually supporting. Machine guns should have wire screens (cyclone fencing) to deflect grenades and to detonate rockets.

j. Shut off gas and electricity to prevent fires. Prepare for the possibility of fires, floods, and electrical hazards.

k. Stockpile food, water, ammunition, etc., if defending for an extended period.

l. Select communications methods (e.g., primary wire, messenger, voice, hand and arm, air panels, phone) that support survivability.

m. Plan escape routes and rehearse if time permits.

n. Develop counterattack plan and identify force.

o. Develop a retrograde plan.

Countermechanized Operations

1. Tactical Considerations.

a. Identify and prioritize mechanized avenues of approach and mobility corridors.

b. Establish the means to detect enemy armor.

c. Conduct intelligence preparation of the battlespace (IPB).

d. Establish forces for security.

e. Use the terrain to gain advantage.

f. Ensure the barrier plan supports the defensive plan. Barriers are essential in the defense.

g. Integrate all supporting arms into the combined-arms countermechanized scheme.

h. Employ weapons in mass and in depth.

i. Decide whether to fight from battle position(s) or sector(s).

2. Countermechanized Fires (two types).

a. Concentric and ever-increasing volumes of fire delivered by—

- Heavy antitank weapon (HAW).
- Medium antitank weapon (MAW).
- Light antitank weapon (LAW).

b. Massed surprise fires.

(1) Direct fire weapons engage simultaneously in an ambush.

(2) Supporting arms may be used in the same manner as concentric method.

3. Engagement Areas.

a. Use engagement areas as a tool to help concentrate fires and optimize fire distribution.

b. Identify the engagement area by target reference points (TRPs) or by prominent terrain features.

c. Design defense around avenues of approach, not around engagement areas.

4. Weapons Employment Considerations.

a. Mutual support.

b. Overlapping sectors of fire.

c. Dispersion.

d. Primary, alternate, and supplementary positions.

5. Tactical Control Measures/Coordinating Instructions.

a. TRPs.

b. Sectors of fire.

c. Engagement criteria.

d. Target precedence.

e. Criteria for initiating fires (event, command, or time).

f. Trigger lines/points.

g. Break lines allow weapons to displace to alternate, supplementary, or successive positions.

h. Successive battle positions.

Engagement Areas

1. General Considerations.

a. Used as a tool to concentrate fires and optimize their effects.

b. Used most effectively with combined arms.

(1) Fixed-wing close air support (CAS).

(2) Rotary-wing CAS.

(3) Artillery.

(4) Tanks.

(5) Antitank guided missiles.

(6) Weapons organic to the infantry battalion/rifle company.

c. Identified by target reference points (TRPs) on the corners of the engagement area or by easily recognizable terrain features around the engagement area.

2. Planning Considerations.

Determine the location of the engagement area based on mission, enemy, terrain and weather, troops and support available-time available (METT-T).

a. Mission. Design the engagement area to produce the desired effects that support the scheme of maneuver. Different missions may favor different approaches.

b. Enemy. Analyze the threat and task-organize and decide which portion (i.e., advance guard, main body, rear guard) to engage by determining the—

- Size and configuration of enemy forces.
- Distribution between echelons and composition of each.
- Time available to prepare the engagement area.

c. Terrain and weather.

(1) Identify restricted avenues of approach that limit the enemy's ability to deploy.

(2) Find the avenue of approach that allows the best—

- Cover and concealment.
- Avenues of egress for disengagement and employment of weapons at maximum range.

(3) Decide if terrain and weather favor massed surprise or concentric fires (HAW, MAW, LAW).

(4) Determine whether to defend by sector or from battle positions.

d. Troops and support available. Attempt to overwhelm the enemy with different threats to put him in a dilemma or survival situation.

e. Time available. Specify the time to move to the engagement area and get all units and obstacles set in place by determining—

- How fast the enemy can move across the terrain.
- How many shots can be taken into the engagement area.

- How fast can a disengagement and egress back to the next position be accomplished.
- How much ammunition is required for engagement and pre-stage ammunition at subsequent positions to expedite resupply.

3. Refinement Considerations.

a. When augmenting existing or natural obstacles, the obstacles may be used to—

(1) Stop the enemy.

(2) Split the enemy column.

(3) Divert the enemy column and reduce the width of the engagement area.

b. When positioning direct fire weapons—

- Consider the enemy will target ideal positions from his map study.
- Select positions that aren't obvious yet meet the employment criteria.
- Use "hot/cold" fighting positions.
- Evaluate each weapon type individually.
- Use tanks to displace rapidly, to kill quickly and accurately, and to protect other elements as they egress.

c. When calculating hit probability—

- Use the size of the engagement area.
- Consider the speed the enemy can move over the terrain.

- Determine the rate of fire and effects of other arms.
- Determine if the enemy can be stopped or merely slowed down.

d. When employing rotary-wing CAS—

- Use artillery suppression to limit exposure to enemy fires.
- Select a holding area and two or more firing positions.

e. When employing fixed-wing CAS—

- Use well beyond the engagement area.
- Use on trapped vehicles in and beyond the engagement area.
- Use for counterbattery fire.

f. When planning artillery, plan for fires beyond the engagement area, in the engagement area, and in front of the position.

g. When establishing conduct of fire (sequencing) for each weapon—

- Assign fire distribution by sectors of fire, TRPs, and trigger and break lines.
- Specify fire control (on order or event oriented).
- Determine engagement/disengagement criteria.
- Establish target precedence.

h. When establishing command and control for fires into an engagement area—

- Centralized command is critical. The commander must control initiation of artillery, change target priorities as

required, change engage/disengage criteria as required, and conduct a rehearsal with all elements participating. This will ensure communication networks function, artillery is on target, and timing is on.

- Decentralized control allows leaders to take rapid advantage of enemy weaknesses and exploit them. The commander must ensure all unit leaders are well briefed and have a clear understanding of the task, intent, and plan of engagement.

i. When conducting contingency planning, develop plans that address no friendly artillery, no friendly CAS, significant enemy air threat, enemy suppression of artillery, early discovery of friendly positions, early enemy deployment, etc.

Conducting Reconnaissance to Define and Build an Engagement Area

1. Identification.

Identify mobility corridors, avenues of approach, and key or decisive terrain.

2. Engagement Area (EA).

Determine the location of engagement area issued by higher headquarters.

3. Battle Position.

Determine the ground location of proposed battle position(s) and observation posts (OPs)/listening posts (LPs):

- Walk/drive the engagement area and area of operations if possible.
- Get the feel of the terrain in order to use it to gain advantage.
- Confirm or deny the information presented during the intelligence preparation of the battlespace (IPB) process.

4. Target Reference Points.

Identify target reference points (TRPs).

a. Decide where to kill the enemy.

(1) Mark and identify TRPs for massing fires on specific mobility corridors.

(2) Mark and identify TRPs for platoon sectors of fire.

(3) Look for possible obstacles positioning sites (based on mission, enemy, terrain and weather, troops and support available-time available [METT-T] analysis) while moving through the engagement area.

(4) Determine how these obstacles can be integrated into a coherent defense.

b. Move vehicles and weapons into position. Drive the engagement area while gunners make range/sketch cards. Identify dead space.

c. Identify the proposed battle position from the enemy's perspective. Determine at what point concealment/surprise is lost.

5. Direct Fires.

a. Ensure support and fields of fire.

b. Consider time of flight (antitank guided missiles [ATGMs]).

c. Consider effective range.

d. Consider cover, concealment, and camouflage.

e. Consider flanking shots.

f. Determine ability to maneuver.

g. Determine displacement routes.

h. Consider successive positions.

6. Indirect Fires.

Plan indirect fires to cover dead space.

a. Coordinate with adjacent units and confirm or deny their ability to provide overlapping fires.

b. Mark and identify trigger lines with TRPs.

c. Add trigger lines to range/sketch cards.

7. Vehicle Fighting Positions.

Prepare vehicle fighting positions.

8. Obstacle Locations.

Identify proposed obstacle locations and purpose (i.e., turn, fix, disrupt, block).

a. Identify general obstacle location with engineer if available.

b. Direct the engineer to mark specific obstacle locations on the ground.

c. Verify that designated gunners can see obstacle markers, observe weapons effects, and cover obstacles with direct fire.

d. Move obstacles to ensure observation of obstacles and effects. (Ensure that the new obstacle locations conform to the commander's intent.)

e. Add proposed obstacles to range/sketch cards (i.e., change broken lines in graphics to solid as the obstacles are completed).

9. Dismounted Infantry Positions.

Plan for dismounted infantry positions.

a. Identify dismounted avenues of approach.

b. Identify and mark dismounted infantry TRPs to guard obstacles; to cover dead space, flanks, and rear; and to hold key or decisive terrain.

c. Identify dismounted infantry battle positions from the enemy's perspective.

d. Designate and mark crew-served weapons and squad positions.

e. Record sector limit data on fire plan sketch.

f. Move Marines into position.

g. Walk engagement area.

(1) Position mortars, M203s, and claymores to cover dead space.

(2) Mark and identify trigger lines with TRPs.

(3) Add trigger lines to range cards.

Retrograde Operations: Delay

1. General Considerations.

a. The force under pressure trades space for time and avoids becoming decisively engaged.

b. The delaying unit simultaneously does the following:

- Destroys as much of the enemy force as possible.
- Causes the enemy to deploy repeatedly.
- Preserves the friendly force's freedom of maneuver.
- Conserves combat power to fight again.

c. The higher headquarters defines the delay operation in terms of preservation of the force, as well as time and terrain.

2. Fundamentals.

a. Ensure centralized control, but decentralized execution.

b. Make maximum use of terrain to slow the enemy and gain advantage.

(1) Key terrain.

(2) Observation and fields of fire.

(3) Cover and concealment, including observation from the air.

(4) Obstacles, both natural and artificial.

(5) Avenues of approach, to include visibility, movement, fire support, and battlefield mobility.

c. Force the enemy to deploy/maneuver.

(1) Slow the enemy's progress.

(2) Trade space for time.

d. Avoid decisive engagement.

(1) Make the enemy deploy; develop the situation.

(2) Displace to the next position (successive delay/alternate delay) before the decisive engagement occurs.

(3) Assign platoon sectors for each avenue of approach within the company sector.

3. Control Measures.

a. Sectors for each committed unit are established by boundaries.

b. Location of battle positions or defensive positions.

c. Phase lines.

d. Checkpoints.

e. Location of observation posts/listening posts for each battle position or defensive position.

f. Passage points.

g. Routes (primary and alternate) from one position to the next.

h. Location of supply routes or ammunition caches.

i. Indirect fire targets, priority of fires, priority targets, and family of scatterable mines targets.

j. Establishment and dissemination of criteria for disengagement.

k. Destruction of friendly items and gear.

4. Mobility Considerations.

a. The larger the mobility differential achieved by the delay force over the enemy, the greater the probability of success.

b. Mobility is increased by—

- Conducting personal reconnaissance of all delay routes and delay positions.
- Improving existing roads and trails.
- Executing well-rehearsed movements.
- Ensuring proper siting of antiair and antitank guided missile assets.
- Positioning security forces at chokepoints.
- Evacuating casualties early.
- Caching excess supplies along delay routes.
- Controlling key terrain that dominates high-speed avenues of approach.
- Destroying selected roads and bridges.
- Improving natural obstacles and covering them by fire.
- Employing indirect fire and smoke to degrade the enemy's vision and rate of advance.

5. Deception Considerations.

a. Take maximum advantage of darkness and periods of limited visibility.

b Employ dummy minefields and decoy positions.

c. Maintain the normal radio traffic patterns.

d. Employ proper radio procedures in disengaging units.

e. Use demonstrations and feints to divert the enemy's attention from actual activities.

Retrograde Operations: Withdrawal

1. General Considerations.

a. A planned operation in which a force in contact disengages from an enemy.

b. Intention is to put distance between the friendly unit and the enemy as quickly and inconspicuously as possible.

c. A withdrawal operation differs from a delaying operation in that the main purpose is to remove the force from the presence of the enemy.

d. Elements may conduct delaying operations to gain time for the force to disengage.

2. Types of Withdrawal.

a. Withdrawal not under enemy pressure. Freedom of action is preserved.

b. Withdrawal under enemy pressure, fighting to the rear.

3. Purpose.

a. To avoid destruction of the force.

b. To avoid battle under unfavorable conditions.

c. To draw the enemy into an engagement area.

d. To allow the force to be used elsewhere.

4. Planning Considerations.

a. New locations of rear positions/assembly areas.

b. Sectors/routes of withdrawal, guides, and traffic.

c. Timing and sequencing of withdrawal.
d. Composition and mission of detachments left in contact (DLICs) (e.g., 1/3 rifle company, 1/2 weapons platoon).
e. Actions on enemy contact.
f. Location/composition of ambushes.
g. Supporting fire plan/displacements.
h. Deception measures and tactical cover.
i. Control measures (i.e., checkpoints, phase lines, initial points, and release points).
j. Medical evacuation and movement of logistic trains.
k. Traffic control measures/priorities.
l. Alternate plans and counterattack plans.
m. Commander's daylight reconnaissance.
n. Destruction of equipment left behind.
o. No communications plan/procedures.

5. Time of Withdrawal for the Detachment Left in Contact (DLIC).

a. On order.
b. Designated time.
c. Event.

6. Withdrawal Under Pressure.

The covering force is behind the initial position, and there is no detachment left in contact.

7. Reasons for Delay.

a. Allow time to regain sufficient strength.
b. Draw the enemy into an unfavorable position.
c. Learn the enemy's intent through time and intelligence.
d. Protect the main force.
e. Gain time to reestablish defenses.

8. Fundamentals.

a. Characterize by centralized control and decentralized execution.
b. Make maximum use of terrain and obstacles.
c. Force the enemy to deploy and maneuver.
d. Maintain contact.
e. Avoid being decisively engaged.
f. Develop a counterattack plan.
g. Maintain a strong reserve.
h. Require a reserve that only the commander can commit.
i. Develop alternate plans.

9. Overlay.

a. Initial positions.
b. Subsequent battle positions.
c. Main battle force routes.
d. Counterattack plans.
e. Control measures for rear passage of lines.

Retrograde Operations: Retirement

A retirement operation occurs when a force moves away from the enemy. Proper security is maintained during the movement since enemy conflict is probable.

Rear Area Security

1. Principles.

a. Rear area security is a Marine air-ground task force (MAGTF) commander's responsibility.

b. Units are responsible for their own security.

c. The rear area security effort will normally place minimal reliance on the ground combat element (depending on the enemy threat and situation).

d. The rear area security effort must be balanced against the threat.

2. Security.

a. The threat should be determined before deciding on a security plan.

b. External and perimeter rear area security considerations are as follows:

- Are there established boundaries? (May organize into smaller, mutually supporting positions or a larger defensive position.)
- Where will avenues of approach be located?
- Can the site (e.g., obstacle, barrier/existing structure) be isolated?
- Are fortifications required?
- Where will access points and search points be located?
- Is a lighting plan necessary?

- Are berms or antivehicle ditches required?
- Where will sentry posts (e.g., observation, fields of fire, mutual support) be located?
- Are roving patrols necessary?
- What are the specific weapons required for each post?
- Have fires been coordinated with adjacent units? (Have impact areas been checked?)

c. Internal rear area security considerations are as follows:

- Has the location response team of the reaction force been determined?
- Are combat service support operations center, rear area operations center, and command post security procedures established?
- Are observation posts feasible?
- Are fortifications necessary?
- Has a plan to control hired nationals been established?
- Is a traffic plan established?

3. Planning Considerations.

a. Determine the number of Marines available.

(1) Designate a chain of command.

(2) Ensure there are enough personnel for manning at least two reliefs, but three is ideal.

(3) Assign qualified Marines for each relief or crew-served weapons.

(4) Designate a squad leader for each relief.

(5) Establish a command element (i.e., commander, senior enlisted, and radio/telephone operator).

b. Determine the number of posts required.

(1) Ensure mutual support.

(2) Determine access routes for the reaction force.

(3) Designate alternate and supplementary posts.

c. Specify the types of posts.

(1) Sentry post.

(2) Observation post.

(3) Duty watch in the rear area operations center.

(4) Vehicle search points.

(5) Pedestrian search points.

(6) Vehicle access points.

(7) Pedestrian access points.

(8) Combat service support operations center, rear area operations center, and command post security guards.

(9) Roving patrols.

d. Specify personnel rotation and shift length (6 hours or less).

e. Establish a crowd/mob control plan.

f. Designate an internal reaction force (i.e., an off-duty relief of the security force).

g. Establish rules of engagement (ROE) and determine constraints and restraints.

h. Determine sentries' tasks.

4. Observation Posts.

a. Planning considerations.

(1) Select overt or clandestine posts.

(2) Analyze mission, enemy, terrain and weather, troops and support available-time available (METT-T), including civil situation/routine.

(3) Conduct reconnaissance (pick site with an observation area, concealment area, and a covered entry/exit).

(4) Determine the observation post (OP) team (2- or 4-man) and equipment (e.g., binoculars, cameras, weapons).

(5) Plan time and method for occupation, relief, and watch routine.

(6) Plan for OP protection. Coordinate with reaction force/patrols.

(7) Determine action in case clandestine OP is compromised.

(8) Plan logistic (e.g., beans, bullets, Band Aids, bad guys [the 4Bs]; batteries; record log; cooking authorization).

(9) Plan for communications.

b. Orders for observation posts (i.e., tasks, ROEs, and reports to higher headquarters).

5. Fortifications and Obstacles.

a. Fortifications are constructed considering enemy capabilities and limitation.

(1) Use sandbags. If possible, use engineers to determine the limitations of using sandbags on/in the building.

(2) Cover window screens to deny enemy observation and sniping. Also, tape windows to reduce blast effects.

(3) Protect the roof. Placing chain link fencing and welded mesh 1 meter above the roof will detonate incoming mortar projectiles. Use sandbags to absorb shrapnel.

(4) Use screens made of chain link fencing to protect against rocket propelled grenades and thrown rocks.

b. Obstacles are used to slow down, turn, or stop enemy vehicles and personnel.

(1) Consider the enemy may use subsurface or sewer approaches.

(2) Stagger obstacles across the route to create a serpentine maze.

(3) Scatter single sandbags to create road bumps and create delays.

(4) Designate an access point.

(5) Illuminate fences, gates, and obstacles, if possible.

(6) Cover obstacles by observation and fire.

6. Reaction Force.

a. Consider assets available.
b. Provide adequate mobility and firepower to counter threat.
c. Establish procedures for employment and contingency plans.
d. Rehearse.

MILITARY OPERATIONS OTHER THAN WAR

Counterinsurgency Operations

1. General Considerations.

Counterinsurgency operations are military, paramilitary, political, economic, psychological, and civic actions taken by a government to defeat insurgency. It is one of the most frustrating and difficult operations for a military force to execute. Its overall strategy will be crafted at the higher levels of command. Unit commanders will want to emphasize the following principles to their Marines.

a. Political. Support of the people is the key to a lasting victory. Marines must understand the culture and customs of the local population. Commanders must give background classes on the nation's political history and conditions that led to the insurgency. If available, use native interpreters or scouts to teach basic language skills.

b. Intelligence. Intelligence collection is fundamental to defeating the insurgent. While on patrol or moving, Marines should be on the lookout for anything unusual and immediately report information to higher headquarters.

c. Tactical situation. Guerrillas strike at the time and place of their choosing. They may be inactive for long periods, strike after collecting detailed intelligence, and then flee, disperse,

or blend into the population. Identification of the leadership/ infrastructure is key to defeating the insurgent.

d. Flexibility. Marines must be prepared to conduct a variety of tactical operations.

e. Mobility. Generally, guerrillas know the area, blend in with the population, and move relatively freely until they strike. Marines must deny this freedom of movement to the insurgent.

f. Minimum use of force. Marines must understand and observe the rules of engagement. Misuse of force can have repercussions among the local population and possibly within the U.S.'s allied political structure.

g. Patience. Marines must stay alert. Counterinsurgency operations are long and often boring. Guerrillas wait for the occupying force to become complacent and then strike. Emphasize security, security, security.

h. Reserves and reaction forces. Counterinsurgency operations usually saturate the area with small units and then reinforce rapidly when contact with the insurgent is made. The ability to communicate is essential; otherwise, small units risk being isolated/cutoff.

2. Tactical Tasks.

a. Security operations.

(1) Protect the populace.

(2) Conduct with or conducted by host nation military or police forces.

b. Searches.
   (1) Deny the guerrilla force freedom of movement.
   (2) See appendix G for more information on these tactical tasks.
c. Civil disturbance/riot control. See Crowd and Mob Control on page 103.
d. Raids or strikes. Create doubt and uncertainty in guerrilla forces.
e. Patrols.
   (1) See Patrolling on page 131 and Urban Patrolling on page 143.
   (2) Use saturation patrolling which is critical to any counterinsurgency operation.
f. Ambushes. Deny the guerrilla force freedom of movement.
g. Humanitarian operations. Perform medical/dental civic actions, rebuild schools/hospitals, distribute food, etc.
h. Roadblocks. See appendix G for more information on these tactical tasks.
i. Observation points—
   - Deliver information on the enemy.
   - Provide security for the force.
j. Perimeter security. See Rear Area Security on page 83 for more information on these tactical tasks.
k. The reaction force—
   - Provides a force that reacts to enemy actions.
   - Consists usually of light/heavy forces with an alert-to-execute timeline and rehearsed contingency plans.

Noncombatant Evacuation Operations

The protection and safeguarding of qualified evacuees is the noncombatant evacuation operation (NEO) focus; however, protecting U.S. personnel is priority. Leaders use mission, enemy, terrain and weather, troops and support available-time available (METT-T) to adapt NEO mission planning and execution guidelines as appropriate.

1. Planning Considerations.

a. Has the location and number of evacuees been determined?

b. What is the threat to evacuees and the NEO force (e.g., terrorist, insurgents, military)?

c. Will the host government assist or resist the NEO efforts?

d. Is the environment permissive, uncertain, or hostile?

e. Where is the assembly area located per the emergency action plan?

f. What is the categorical breakdown of evacuees (to include number and the black, white, gray list if appropriate)?

g. Who is the senior U.S. official? Who are the senior officials?

h. Have the location and number of third country nationals been determined?

i. Have all sensitive U.S. properties and facilities that require security and/or destruction been identified?

j. Where are the helicopter landing zones located? Have sizes, slopes, obstacles, etc., been identified?

k. What type of medical support is required?

l. What are the rules of engagement (ROE)?

m. What is the evacuation plan?

2. NEO Mission Commander's Considerations.

a. Plan for possible deterioration to an uncertain environment.

b. Plan on Marines and evacuees being exposed to equal degrees of danger.

c. Prioritize evacuees.

d. Evacuate personnel if in doubt as to their status.

e. Plan for two or three times more than the number of evacuees briefed.

f. Ensure that families are not separated.

g. Ensure the evacuation control center (ECC) force has an organic reaction capability to deal with contingencies.

h. Take health and comfort packs for evacuees.

i. Use standing operating procedures when—

- Preparing explosive ordnance pits.
- Searching females.
- Dealing with problem evacuees.
- Handling pets.
- Receipting valuables.
- Exercising courtesy.

j. Plan/build demolitions pits as necessary for handling unexploded and confiscated ordnance.

k. Include a public affairs officer and staff judge advocate in the plan to provide media support and to answer claims.

l. Plan for day/night operations.

m. Request permission for use of riot control agents, if required.

n. Show minimal force, but be prepared.

o. Do not piecemeal units into the area.

p. Take medical/chaplain support.

q. Consider all Marine air-ground task force units for support/ show of force.

r. Develop, early in the planning process, a simple cross-deck plan to support planning requirements.

s. Identify showstoppers early (NO GO criteria).

t. Be prepared to leave stay behind forces, if required.

u. Develop plans for the use of alternate sites and evacuation means as required.

v. Develop plans for dealing with mass casualties during operations.

w. Develop contingency plans for recovery of isolated evacuees.

3. Evacuation.

a. Categories.

Category	Tag
I American citizens	red
II Alien members of American families	yellow
III Alien employees of U.S. Government/businesses	green
IV Third Country Nations and other designated aliens	blue

b. Subcategories (listed from the highest to the lowest priority).

(1) Women obviously pregnant.

(2) Women with children, unaccompanied children under 18, and designated sponsors of unaccompanied children.

(3) Aged and infirmed individuals.

(4) Unaccompanied women 18 years or older.

(5) Men 18 or older.

4. Small-Unit Screening, Processing, and Movement Considerations.

a. Instructions to Marines.

(1) ROE.

(2) Procedures for handling very important people (VIP).

(3) Procedures for handling women and dependents.

(4) Procedures for request for political asylum and temporary refuge.

(5) Procedures for handling combatants and infiltrators.

b. Evacuee considerations.

(1) Designated VIPs are—

- Handled with courtesy and respect.
- Given priority of movement.
- Assigned guides.
- Provided health care and comfort.

(2) Noncombatants are—

- Searched for contraband.
- Treated as third country nationals.
- Separated into groups of women, children, and disabled/injured people. Women are categorized into groups of mothers, unaccompanied women, and pregnant women.

(3) Individuals seeking political asylum and refuge are—

- Given protection pending approval of their request by Department of State.
- Reported to higher headquarters.
- Denied refuge when their request for asylum is terminated.
- Not encouraged.

(4) Combatants/infiltrators are treated as enemy prisoners of war (see app. H) and are—

- Searched for weapons and contraband.
- Segregated into groups.
- Silenced (enforce silence at all times).
- Evacuated quickly and humanely.
- Safeguarded (keep under guard and protect).
- Tagged as required to identify an individual's personal effects and equipment.

c. General evacuee treatment rules.

(1) Consider evacuees are not prisoners of war, don't treat them as such.

(2) Use the minimum force required for the situation.

(3) Ensure that pets are left behind.

(4) Ensure that gifts, tips, or bribes are not accepted.

(5) Enforce baggage limitations.

(6) Keep people and their baggage together if possible.

d. Site reconnaissance and liaison.

(1) Department of State representative should accompany.

(2) Prospective staging/processing sites are identified.

(3) Security requirements are identified (e.g., protection from small arms and in direct fire).

e. Establishment of presence at the evacuation site.

(1) Identify yourself and your purpose.

(2) Reassure evacuees of their safety.

(3) Explain the procedures and safety considerations.

(4) Seek evacuees' cooperation.

f. Processing procedures at the evacuation site.

(1) Maintain order.

(2) Provide security.

(3) Provide guidance.

(4) Ensure timeliness.

(5) Ensure continuous flow of evacuees.

5. Example Organization of a Platoon-Sized Evacuation Control Center.

a. Platoon sergeant is assigned responsibility for conducting reception/registration.

b. One squad is assigned responsibility for conducting screening (i.e., verifies identification, conducts searches, and tags individuals and belongings).

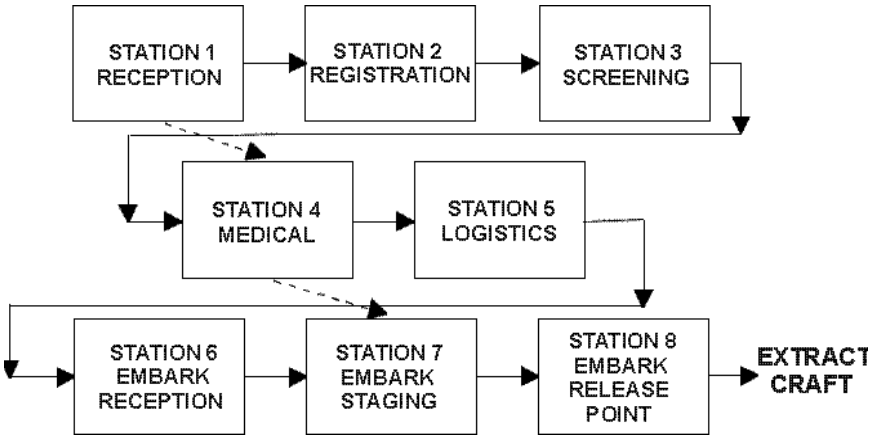
c. Corpsmen provide medical support.

d. Appropriate individual(s) are designated to provide logistic support.

e. One squad is assigned responsibility for embarkation of evacuees.

f. One squad is assigned responsibility as security and reaction force.

g. The diagram below depicts a typical ECC organization and flow pattern of evacuees.



6. Inspections, Searches, and Movement Considerations.

a. Evacuees and their baggage are inspected for specified contraband, weapons, explosives, or sensitive items before boarding military aircraft or naval vessels. When conducting inspections—

- Brief evacuees on the practical reasons for conducting the search, especially safety concerns.
- Deny evacuation to any evacuee who refuses to submit to a search.

b. Personal searches of female evacuees are conducted by female embassy or medical personnel.

c. American ambassadors and other designated U.S. diplomats, their families, papers, or personal effects are not searched.

d. Designated foreign diplomats, their families, papers, or property are immune from searches. Their personal baggage may be examined in their presence only if serious grounds exist to believe the baggage contains contraband.

e. A foreign diplomatic pouch may not be searched, but the evacuation force command may deny the diplomatic courier transportation if the pouch is suspected of containing weapons or explosives.

f. Embarkation procedures.

(1) Assemble and post functional details.

(2) Welcome/brief evacuees.

(3) Search personnel and baggage.

(4) Collect valuables and issue receipt.

(5) Screen for medical problems.

(6) Move to embark stations.

g. Procedures at debarkation destination.

(1) Disseminate and brief debark plan.

(2) Debark in groups as designated in the debark plan.

(3) Make provisions for lodging and food.

(4) Customs (follow host government procedures; Department of State coordinates).

(5) Follow-on transportation is the responsibility of the Department of State.

Crowd and Mob Control

1. Principles.

a. Maintain flexibility to change tactics in an unstable situation.

b. Rehearse procedures and drills.

c. Give the appearance of minimum force with maximum troops.

d. Establish control.

(1) Position leaders properly.

(2) Use a megaphone.

(3) Communicate with the crowd.

e. Maintain all-round defense.

(1) Assign sectors of observation.

(2) Ensure 360-degree security.

f. Use speed when deploying, arresting, and reacting to change.

g. Gain surprise by being unpredictable.

2. General Approach.

a. The best way to disperse rioters may be to make arrests and to make it plain that further rioting will result in physical discomfort to lawbreakers.

b. Mob unity may be disrupted by threatening use of force, arresting leaders, and breaking the mob into smaller groups.

c. Remember, whatever measures are taken, an escape route must always be left open to allow rioters to disperse.

d. Escalating measures may require the application of force.

3. Escalating Orders.

a. Try to talk.

(1) Sit down with the riot leaders.

(2) Ensure Marines in riot gear are out of sight.

b. Deploy if talking fails; move Marines quickly/efficiently into position.

c. Give warning and instruct the crowd to disperse.

d. Take pictures to use for prosecution of individuals and for psychological effect.

e. Advance Marines equipped with riot gear in formation (skirmish line, wedge, or echelon).

(1) Choose formation based on desired destination.

(2) Drive against the obstacle that forces the mob to split with the intent to divide and disperse mob elements until mob cohesion is lost.

(3) Position units to follow in a column behind the advanced guard to support the advance and to pick up independent advanced guard duties as the crowd is forced down multiple side streets.

(4) Employ riot batons, riot control agents, water hoses, and fixed bayonets when appropriate.

(5) Equip vehicles with people pushers (e.g., wood platforms or concertina rolls affixed to vehicles front).

(6) Employ snipers only in a life-threatening situation.

f. Dominate the area when the crowd begins to break up.

(1) Allow rioters to escape.

(2) Prevent rioters from massing in another location.

g. Withdraw and return control to civil authorities.

4. Summary.

a. Minimize the necessary force to maintain continuous control.

b. Allow an escape route.

c. Remember the principles.

d. Escalate the use of force.

(1) Follow the rules of engagement.

(2) Practice constraints and restraints.

e. Emphasize patience.

(1) Riots are very stressful.

(2) The mob mentality will eventually subside.

Cordon and Search Operations

1. General Considerations.

a. Understand the commander's intent.

b. Exercise tight control over the unit during contact with civilians.

c. Consider likelihood of contact, other than booby traps (contact inside the village may be minimal).

d. Observe the behavior and reaction of children and parents at all times.

e. Isolate those persons that need to be questioned.

2. Principles.

a. Conduct a cordon and search operation with limited inconvenience to the population.

b. Show respect for inhabitants, property, customs, etc.

c. Conduct the search using local forces (e.g., militia, police) with U.S. assistance if possible.

d. Execute as a combined civil and military operation.

3. Organization of the Force.

a. Cordon element.

(1) Control access in and out.

(2) Use the largest element.

b. Search element.
   (1) Use as small an element as possible.
   (2) If possible, search element should not contain U.S. personnel.
   (3) Task-organize as needed into a minimum of:
      - Reconnaissance and search teams.
      - Population control team.
      - Prisoner control team.
      - Documentation team.
      - Medical team.
      - Census team.

c. Reaction element.
   (1) Use reserve.
   (2) Position near the highest threat area.

4. Intelligence Requirements.

a. The village.
   (1) Physical layout (three-dimensional).
   (2) Avenues of approach.
   (3) Terrain and vegetation.
   (4) Livestock/animals.
   (5) Potential alarms.

b. The inhabitants.
   (1) Basic daily routine.
   (2) Number of men in the village.
   (3) Behavior of the children.

c. Guerrilla activity (usually very little information is gained).
   (1) Degree of training.
   (2) Village (use and reliance).
   (3) Security (type and degree).

5. Planning Considerations.

a. Task-organize cordon, search, and reserve force.
b. Determine the method and time of establishing the cordon.
c. Determine the approach/withdrawal route, time of entry, and main effort.
d. Maximize observation to avoid gaps in the cordon.
e. Consider the cordon to village distance may vary with the situation, but 800 meters is generally a good working distance.
f. Locate the reaction element in the most critical area.
g. Minimize the number of people entering town.
h. Setting the cordon, emplacing the reaction element, and approaching the search element are the critical areas that will compromise the mission.

SPECIFIC TACTICAL OPERATIONS

Relief in Place: Relieving Unit

1. Planning Considerations.

a. Conduct actual relief at night whenever possible to reduce vulnerability/threat. (Assume the enemy is observing.)

b. Conduct daylight reconnaissance by company commander/ platoon commanders and liaison personnel (guides).

(1) Designate area.

(2) Designate routes.

(3) Determine guide linkup points.

(4) Become familiar with—

- Defense (fire plan sketch/overlay).
- Terrain.
- Enemy situation.
- Fire support plan.

(5) Coordinate command post location (collocate if possible).

(6) Determine the reconnaissance method (i.e., unit or echelon, indepth or adjacent).

(7) Leave liaison personnel with the unit to be relieved.

(8) Keep personnel informed of all changes.

(9) Walk/talk through the evolution. (Leaders must ask themselves: Can the mission be accomplished from this position?)

c. Make arrangements for—

- Turnover of fire plan sketches, range cards, minefield records, obstacle records, etc.
- Turnover of excess barrier material, wire, mines, stock-piled ammunition, etc.
- Exchange/turnover of machine gun tripods, mortar base-plates, field phones, camouflage netting, etc.
- Guides to mark the route to platoon and squad release point.
- Attachment of crew-served weapons for movement to the unit in whose area the weapons' position is planned.

2. Tactical Considerations.

a. Command post is located to best coordinate relief (collocate command post if possible).

b. Company is moved to platoon release points.

c. Platoons are guided to squad release point.

d. At squad release points—

(1) Guides from an outgoing unit lead the squad to the defensive position.

(2) One fire team is relieved at a time.

(3) Each man is briefed by the outgoing man and receives range cards, etc.

(4) Crew-served weapons are relieved after rifle units. Range cards are received.

(5) Local security is relieved last.

e. A clear event/time for battle handover/passage of command is designated. Battle handover usually occurs when two-thirds of the unit is in place.

Relief in Place: Unit to be Relieved

Leaders must address the following planning considerations:

- Company/platoon commanders remain in place during relief units' reconnaissance.
- Company commander/executive officer coordinate the tentative plan (e.g., routes/guides).
- The executive officer and platoon representatives are tasked to—
  - Reconnoiter the route for the relieving unit.
  - Provide and man guide locations.
  - Coordinate and reconnoiter the new area to be occupied.
- The commander of the unit to be relieved links up with the commander of the relieving unit. Commanders must determine—
  - Command post location (collocate if possible).
  - Turnover of excess ammunition and supplies.
  - Turnover of fire plan sketches, obstacle barrier plans, etc.
  - Exchange of crew-served weapons, etc.
- Company/platoon commanders brief incoming unit commanders on—
  - Enemy situation.
  - Defensive layout.

- Terrain.
- Fire support plan.
- Fire plan sketch/overlay.
- Communications (especially if hard-wired).

- Company/platoon commanders designate—
  - Squad release points for the incoming unit.
  - Guides for each squad.
  - Sequence of relief.
  - Rifle units (individual briefs).
  - Automatic weapons locations.
  - Local security.
- Weapons crews are attached to rifle platoons for movement.
- Squads move to platoon assembly areas once they are relieved.
- Platoons move to the company assembly area once the platoon is relieved.

Passage of Lines: Passing Unit

1. Planning Considerations.

a. Bypass units whenever possible. (Passage of lines is difficult and time consuming.)

b. Determine the enemy situation. (Is the unit moving forward toward the enemy or rearward away from the enemy?)

c. Determine tactical employment of the unit being passed (include fire support overlays and communication plans).

d. Determine security measures of the stationary unit.

e. Conduct reconnaissance for—

- Areas, lanes of passage, release points, linkup points, and check points.
- Command post/combat operations center location.

f. Specify the number of guides needed.

g. Develop security measures for both units during passage.

h. Plan fire support.

(1) Extent.

(2) Type.

(3) Control measures.

i. Provide logistic support for the casualty collection point, enemy prisoners of war, etc..

j. Establish conditions for when passage of command occurs.

2. Passage Considerations.

a. Link up with the stationary unit.
b. Establish collocated command posts/combat operations centers.
c. Direct to guides linkup.
d. Deploy the security element to clear the area forward of the release point.
e. Use smoke to screen passage.
f. Conduct passage quickly.
g. Decide on required conditions for the passage of command.
h. Notify all subordinate units when passage of command is conducted.

Passage of Lines: Stationary Unit

The commander of the stationary unit normally controls the conduct of the passage of lines. Leaders must address the following planning considerations:

- Provide intelligence report (enemy situation) to the passing unit.
- Provide tactical plans (include fire support overlay and communications plans).
- Provide guide(s) for reconnaissance to be conducted by elements of the passing unit.
- Brief the moving unit on security measures.
- Provide recommendations on routes.
- Coordinate linkup passage, command post location, and command relationship.
- Provide guides at designated points.
- Brief the extent, type, and control measures for provided fire support.
- Determine the extent of logistic support for casualty collection points, enemy prisoners of war, etc.
- Conduct the passage of command at a time mutually agreed upon by both units. If command is transferred prior to passage, the passing unit controls the unit positioned in contact with the enemy.
- Inform all subordinated units of the passage of command.

Linkup Operations

1. Concept of Operations.

The key to a rapid and successful operation is a clear understanding of the units' responsibilities and the recognition of signals used.

a. Stationary force tasks.
   (1) Recommend the establishment of a restricted fire line to the fire support coordinator.
   (2) Recommend the time and location of primary and alternate linkup points to the S-3.
   (3) Man linkup points.
   (4) Reply to the linkup force's long-range and short-range recognition signals.
   (5) Provide guides for the linkup force.
   (6) Provide lanes/routes through obstacles to facilitate linkup force movement.
   (7) Provide assembly areas for the linkup force.
   (8) Provide information on recent enemy activity.

b. Linkup force (moving force) tasks.
   (1) Arrive on time at designated linkup point or switch to the alternate linkup point.
   (2) Initiate long-range and short-range recognition signals.
   (3) Prepare to continue the operation.

c. Higher headquarters tasks.
   (1) Establish command relationship and responsibilities of the joining forces.
   (2) Coordinate fire support to include control measures (e.g., restrictive fire line).
   (3) Designate primary and alternate linkup points.
   (4) Estimate time of linkup.
   (5) Designate one unit to assume stationary force tasks if both units are moving.

2. Coordinating Instructions.

Commanders establish contact as early as possible to coordinate:

- Linkup time and command relationships of units involved.
- Mutual recognition signals (i.e., near, far, and alternates).
- Communications plan.
- Schemes of maneuver (to include control measures).
- Action to be taken after linkup. Units maintain security by continuing the mission as quickly as possible.
- Exchange of liaison officers.
- Alternate plans to include routes, lanes, and linkup points.

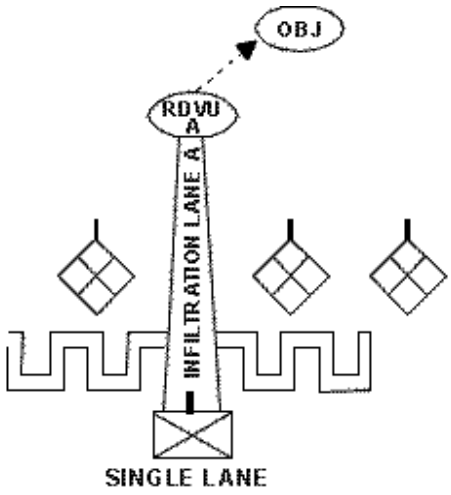
3. Command and Signal.

a. Identify primary and alternate frequencies and call signs.
b. Designate long- and short-range recognition signals for both day and night, as well as alternates for each.

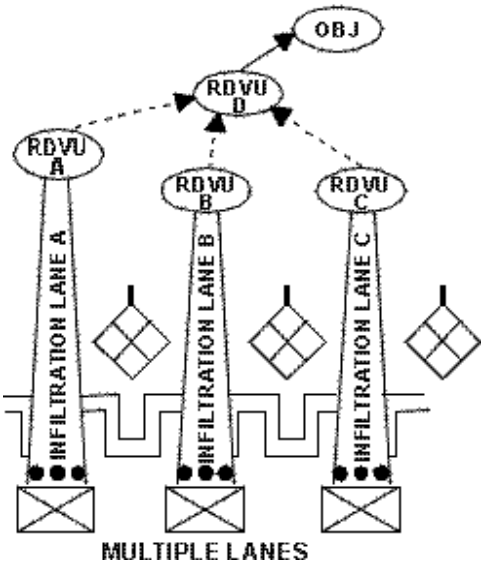
Infiltration

Leaders must address the following general planning considerations:

- Release point locations and markings.
- Time of release.
- Point of departure.
- Assembly areas are defensible, concealed, and large enough for an entire unit. (The first unit organizes the assembly area and provides guides.)
- Time the infiltration must be completed.
- Lanes or guides.
- Single lane or multiple lanes (see page 124).
- Rendezvous point, alternate rendezvous point, and time of rendezvous.
- Lost-man procedures.
- Escape and evasion procedures.
- Contact procedures.
- Near and far recognition signals.
- Route to attack position.
- Objective.
- Fire support.



SINGLE LANE



MULTIPLE LANES

- Size of moving units.
- Planned fires in event of compromise.
- Separation between units (time is generally better than distance).

Convoy Operations

1. General Considerations.

a. Determine type of convoy.

(1) Administrative.

(2) Tactical.

b. Determine the formation.

(1) Open column:

- Normally used during the day.
- Vehicles are spaced between 50 to 100 meters apart.
- May be used at night with infrared radiation lights, blackout lights, chemlights, etc.

(2) Close column:

- Normally used at night.
- Vehicles are spaced approximately 25 meters apart or to the limit of observation of preceding vehicles' blackout lights.

(3) Infiltration:

- Normally used when security (vice speed) and dispersion are critical.
- Vehicles are dispatched individually, in small groups, or at irregular intervals along one or multiple routes.

c. Determine the number and type of vehicles in the convoy structure (head, body, tail).

d. Determine fire support requirements.

(1) Designate planned, on-call targets.

(2) Use priority targets.

(3) Consider aviation support (e.g., rotary-wing close air support for escort, route reconnaissance, and unmanned aerial vehicles).

e. Determine common control measures.

(1) Start point/release point.

(2) Contact points.

(3) Critical points.

(4) Passage points.

(5) Passage lanes.

(6) Routes (primary and alternate).

(7) Checkpoints.

(8) Phase lines.

2. Planning Considerations.

a. Treat a convoy as a vehicular patrol.

b. Brief actions on enemy contact from—

- Front.
- Rear.

- Left.
- Right.
- Sniper.
- Ambush both road not blocked and road blocked scenarios.

c. Plan and brief actions at security halts, both long and short.

d. Plan and brief actions for disabled vehicles.

e. Plan and brief actions at the destination.

(1) Security force tasks.

(2) Drivers tasks.

(3) Specific duties.

f. Plan for primary and alternate means of communication.

(1) Position radios with each element.

(2) Use pyrotechnics, flags, air panels, and hand and arm signals as alternate means of communications.

(3) Develop signal plan and action drills.

g. Plan for the use of guides.

(1) Establish their duties.

(2) Plan for their collection.

h. Plan and brief actions at critical points (i.e., chokepoints).

i. Establish march and catchup speed.

j. Prepare tactical vehicles.

k. Designate air sentinels and mark designated vehicles with air panels.

PATROLLING

Patrol Steps

1. Patrolling Principles.

a. Detailed planning.
b. Productive and realistic rehearsals.
c. Thorough reconnaissance.
d. Positive control.
e. All-around security.

2. Types of Patrols.

a. By mission.
   (1) Reconnaissance.
   (2) Combat.
b. By mobility.
   (1) Foot.
   (2) Motorized.
   (3) Waterborne.
   (4) Helicopterborne.

3. Patrol Planning Steps.

Consider all patrol steps when planning and use only those that are necessary. The order of the steps may vary.

a. Study the mission.
b. Plan use of time (backwards planning).
c. Study terrain and situation.
d. Determine requirements.
e. Organize the patrol.
f. Select men, weapons, and equipment.
g. Issue a patrol warning order.
h. Coordinate continuously. (See app. I.)
i. Make reconnaissance.
j. Complete detailed plans.
k. Issue the patrol order.
l. Supervise at all times, inspect, rehearse.
m. Execute the mission.

4. Patrol Warning Order.

The patrol warning order consists of the following (consider posting for all):

a. A brief statement of the situation (enemy and friendly).
b. Mission of the patrol.
c. General instructions.
    (1) General and special organization.
    (2) Uniform and equipment common to all.

(3) Weapons, ammunition, and equipment.

(4) Chain of command.

(5) A time schedule for the patrol's guidance (backwards planning).

(6) Time, place, uniform, and equipment for receiving the patrol leader's order.

(7) Times and places for inspections and rehearsals.

d. Specific instructions.

(1) To subordinate leaders.

(2) To special purpose teams or key individuals.

Patrol Order Information

1. Task Organization.

a. Units (maintain unit integrity as much as possible).

(1) Security. Address position in formation and responsibilities.

(2) Headquarters. Address position in formation and responsibilities.

(3) Assault. Address position in formation and responsibilities. Designate any subunits required (teams).

(4) Support. Use as required. Comprised mainly of units organic to patrol.

(5) Reconnaissance/reconnaissance and security as required. Include designation of required subunits (teams).

b. Teams.

(1) Assault. Use A, B, C, etc., to designate if more than one assault team.

(2) Reconnaissance/reconnaissance and surveillance. Use A, B, C, etc., to designate if more than one reconnaissance team.

(3) Aid/litter. Provide specific instructions.

(4) Search/enemy prisoner of war. Provide specific instructions.

(5) Demolition. Prepare claymores or satchel charges for the mission.

c. Key individuals.

(1) Team leader is in charge of the patrol and responsible for its conduct. The team leader provides detailed instructions to subordinates.

(2) Assistant patrol leader (APL) is second in command. The team leader provides the APL with detailed instructions on responsibilities, including details on any collateral duties.

(3) Navigator is responsible to the team leader for navigating the patrol.

(4) Radio operator is responsible to the team leader for communication.

(5) Pacers are responsible for conducting and passing pace counts.

(6) Flanks are responsible to the team leader for flank security during movement.

(7) Recorder records all essential information.

d. Reserves.

2. Coordinating Instructions.

a. Specify time of departure.

b. Specify time of return.

c. Designate the primary route azimuths and distances for each leg and illustrate the route on the terrain model.

d. Designate the alternate route azimuths and distances for each leg and illustrate the route on the terrain model.

e. Organize for movement and prepare detailed layout of patrol formation that may be depicted on a diagram.

f. Specify procedures for actions on enemy contact. Talk through the plan in detail to include transitional movements of units/teams.

   (1) Hasty ambush (front, flanks, rear).

   (2) Immediate assault (front, flanks, rear).

   (3) Counter ambush (near/far).

   (4) Break in contact (include plan for specifying direction and distance of movement).

   (5) Reaction to indirect fires (direction and distance).

g. Specify procedures for actions in the objective area. Omit for security patrols, but planning will be extensive for ambush, raid, or reconnaissance patrol. Address occupation of the final preparation position to objective rally point.

h. Specify procedures for departure of friendly lines in detail (use terrain model to talk through).

i. Specify procedures for reentry of friendly lines in detail (include primary and alternate communications plan as well as linkup plan).

j. Specify procedures for actions at rally points. The plan should be talked through (include GO/NO GO plan and escape azimuth, as well as the location of any tentative rally points).

k. Specify procedures for actions at danger areas, both linear and cross compartment, but emphasize the differences.

l. Specify procedures for actions at halts. Delineate between long and short halts.

m. Specify procedures for rehearsals and inspections. Prioritize actions to be rehearsed.

n. Specify debrief.

(1) Location.

(2) Time.

(3) Attendees.

Ambush Patrol

1. Principles.

a. Surprise.

b. Coordinated (violent) employment of fires to include supporting arms to isolate the area.

c. Control is most critical when the enemy is approaching the kill zone.

2. Factors for Successful Ambush.

a. Favorable terrain.

b. Prior planning.

c. Occupation procedures.

d. Control measures.

e. Security.

f. Patience.

g. Movement techniques and individual actions.

h. Fire support planning.

3. Ambush Site Selection Considerations.

a. Availability of natural obstacles can canalize the enemy and/or protect the withdrawal.

b. A suitable ambush site is also good for the enemy.

c. Maps and photographs are good, but sites should be seen firsthand.

d. The selected site should allow the force to egress down a reverse slope.

4. Organization.

a. Assault element.

b. Security element.

(1) Secures objective rally point/final preparation position.

(2) Provides flank/rear security during occupation.

c. Support element is optional. Fires complement the assault element.

d. Patrol headquarters.

5. Occupation of the Site.

a. Position security quickly/quietly.

b. Establish communications.

c. Position machine guns, squad automatic weapons, and grenadiers.

d. Position all other weapons and assign sectors.

e. Prepare claymores, flares, etc.

f. Select location to initiate the ambush (patrol leaders).

g. Estimate completion time for preparation.

6. Preparation of the Kill Zone (if necessary).

a. Once occupation of the ambush site is completed, commence preparation of the kill zone.

b. Patrol leader alerts security/support elements that the assault element is moving into kill zone.

c. Assault element leader moves the team into the kill zone.

(1) Demolition teams emplace mines/demolitions.

(2) Remaining assault element emplaces claymores/obstacles.

(3) Teams report to the assault element leader when preparations are complete and when positions are reoccupied.

(4) Assault element leader makes final inspection of the kill zone.

(5) Assault element leader reports to the patrol leader.

7. Execution.

a. Use designated signals to alert, initiate ambush, lift/cease fires, and withdraw.

b. Enforce fire discipline when fire is initiated. Fires are—

- Immediate.
- Heavy.
- Accurate.

c. Ensure a security or assault element covers the far side if the kill zone must be searched.

d. Withdraw quickly and quietly. Consider the use of booby traps during withdrawal.

8. Other Considerations.

a. Tailor equipment and weapons to the mission.

b. Use field phones or signals (use radio communications by exception).

c. Minimize time spent in the vicinity of the kill zone by conducting rehearsals and reaction drills and by following standing operating procedures.

d. Wait patiently to allow the enemy main body to enter kill zone.

e. Cover withdrawal with mines, booby traps, riot control agents, and supporting fires.

Urban Patrolling

1. General.

The following basic patrolling principles and techniques apply to permissive and uncertain urban environments:

- Overt presence (attempt to establish a positive U.S. presence and the support of the population).
- Depth (urbanized terrain usually limits a patrol's ability to disperse laterally and to maintain dispersion along the length of the patrol formation).
- Mutual support (positioning of units within the patrol in depth enables one unit to cover another's movement [traveling security]).
- Deception/pattern avoidance (vary patrol routes, duration, and departure times).
- Intrapatrol communications (each unit within an urban patrol should have the means to communicate).
- Establishment of a reaction force.
- Three-dimensional threat (pay constant attention to the three-dimensional urban environment).

2. Patrol.

a. Methods.

(1) Dismounted.

(2) Vehicular.

(3) Helicopterborne.

b. Types.

(1) Security patrols make up the vast majority of urban patrols.

(2) Combat patrols are employed to—

- Secure information.
- Confuse the enemy.
- Destroy installations.
- Seize materials or suspicious individuals.

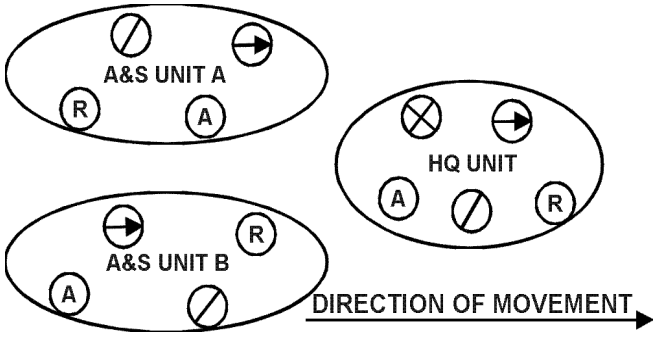
3. Planning Considerations.

a. Rules of engagement must be understood by every Marine.

b. Constraints and restraints may change frequently in response to changing situations.

c. Unit integrity of the fire team/squad should be maintained.

d. The vulnerable nature of patrolling requires subunits to provide for their own security in addition to the combat aspect of the mission.



e. Combined assault and security teams are employed to ensure all-around security.

4. Task Organization.

a. Task-organize to meet the specific mission requirements.

b. Use attachment specialists:

- Explosive detection dogs and their handlers.
- Marine interrogator translator team and counterintelligence team.
- Explosive ordnance disposal personnel.
- Communications personnel.
- Members of host nation or allied military forces.
- Interpreters.
- Local community leaders.
- Local law enforcement officers.
- Public affairs Marines as media personnel escort(s).

Urban Patrol Tips

1. Movement Considerations.

a. Move within the patrol under observation/cover of other individuals.

b. Know where cover can be taken in case of a hostile incident.

c. Plan for contact with civilians, especially children.

d. Expect the presence of moving and stationary vehicles along the route.

e. Have a plan to deal with approaching dogs.

f. Limit the use of camouflage to avoid frightening and confusing the local population (situational).

g. Vary the movement rate during the day, which can range from short halts to brief double time.

h. Take up mutually supporting firing positions that change frequently during short halts.

i. Ensure at least one unit/team is in motion at all times during platoon-sized patrols.

j. Work in pairs, ensuring mutual support.

k. Stay within sight of assigned buddy; last man in unit/team provides rear security.

2. Patrol Formation Considerations.

a. The need for immediate firepower outweighs the dangers of becoming canalized.

b. The headquarters element is located near the front of the patrol.
c. Assault and security elements follow in trace and maintain unit integrity on separate sides of the street.
d. Platoon-sized squads generally travel abreast of each other, along parallel routes.
e. The interval between units depends on mission, enemy, terrain and weather, troops and support available-time available (METT-T), but is usually 100 to 150 meters.

3. Control Measures.

a. Checkpoints and phase lines are located in association with major streets, alleys, buildings, etc.
b. The detailed patrol overlay (see app. J) is forwarded to higher headquarters.
c. The terrain model is maintained at higher headquarters to aid in supervision and control.

4. Individual Tasks.

a. Task marksman to engage point targets.
b. Look out for suspicious or known insurgent vehicles.
c. Attempt to recognize previously identified enemies.
d. Attempt to gain information from casual conversation.
e. Search vehicles and personnel.

5. Hostile Incident Indicators.

a. Observers on rooftops, in windows, etc., who are obviously tracking the patrol.
b. The unusual absence of pedestrian traffic, people on porches, etc.
c. Stores, markets, or street vendors closed suddenly or without explanation.
d. A dramatic change in civilian attitude toward patrol members.
e. Unfamiliar individuals, roadblocks, or vehicles within the patrol area.
f. Vehicles riding unusually low due to overloading (i.e., ferrying people and weapons).
g. Agitators trying to provoke an incident with patrol members.
h. Civilian workers failing to appear at U.S. bases, etc.
i. Normal deliveries, pickups, etc., which are late or early without reason.

6. Immediate Action Drills.

a. Bomb threat/discovery (cordon off and control area).
b. Sniper (seek cover, identify position, limit collateral damage depending on rules of engagement, and attempt to cut off escape routes).
c. Hostile individuals/crowd (see Crowd and Mob Control on page 103).
d. Decisive engagement (treat as a conventional attack).

PART II

FIRE SUPPORT

"There is still a tendency in each separate unit . . . to be a one-handed puncher . . . the rifleman wants to shoot, the tanker to charge, the artilleryman to fire . . . . That is not the way to win battles. If the band played a piece first with . . . the brass horn, then the clarinet, . . . there would be a . . . lot of noise but no music. To get harmony in music each instrument must support the others. To get harmony is battle, each weapon must support the other. Team play wins."

General George S. Patton
(MCDP 1-3, *Tactics*, p. 41)

Property of the U.S. Marine Corps

Fire support section, defensive position.
(Beirut, Lebanon 1982)

GENERAL FIRE SUPPORT

General Information

1. General Considerations.

a. What is the mission?
b. What is the enemy situation?
c. What is the scheme or maneuver?
d. What is the zone of action or defensive sector?
e. What are the most likely avenues of approach?
f. What are the priority targets?
g. What are the desired effects (damage criteria)?
h. Which subordinate unit is the main effort, and who has priority of fires?
i. Will priority of fires or priority targets shift, if so, on what signal?
j. Where are special fires (e.g., smoke, improved conventional munition)?
k. Is there a requirement to register fire support assets?
l. Are there restrictions on supported arms; if so, are restrictive fire support coordination measures needed?
m. What maneuver control measures have been established?
n. What additional fire support assets have been allocated?
o. What are the future plans or on-order missions?

p. Are there command and control (C^2) or communications requirements that are different from the standing operating procedure requirements?
q. What is the guidance on counterfire?
r. What is the guidance on suppression of enemy air defenses?
s. How much time is available?
t. What is the ammunition status?
u. What are special fuze or shell considerations?

2. Planning Considerations.

a. Offense.

(1) Plan fires to cover movement to the objective. Screen, obscure, and/or use deception to cover C^2 assets, fire support assets, observation posts (OPs), listening posts (LPs), and landing zones.

(2) Plan fires to cover movement to the assault position. Request/plan priority target on suspected or likely strong points or ambush sites.

(3) Plan fires to support the attack by—

- Preparing the objective.
- Preparing OPs/LPs.
- Considering the use of smoke to support the deception effort.
- Targeting likely assembly areas (AAs) for reinforcements.

(4) Plan fires in support of exploitation by—

- Pursuing fire along likely withdrawal routes.
- Fixing on the enemy to destroy with direct fires.

b. Defense.

(1) Plan fires forward to canalize/reduce the enemy force by—

- Moving the enemy to the engagement areas.
- Targeting AAs, C^2 assets, and fire support assets.

(2) Plan fires on the flanks to deny the enemy a likely assault position, probable line of deployment, and infiltration routes. Register targets in zone.

(3) Plan fires on the defensive position and final protective fires to support planned couterattack or to cover disengagement/withdrawal.

(4) Plan fires behind the position to cover the withdrawal of friendly forces. Prevent enemy envelopment from the rear.

(5) Confirm targeting decisions with the weapons platoon/company commander.

(6) Add, delete, or amend the fire support plan and then submit to higher headquarters.

(7) Report higher headquarters response to the commander.

(8) Write up fire support plan.

(9) Refine, refine, refine (top-down, bottom-up planning).

(10) Execute.

Company Fire Support Planning

1. General Considerations.

a. Like the regiment's and battalion's fire support planning, company fire support planning must mirror the planning process.

b. At the company level, the planning process consists of troop leading steps commonly referred to as begin planning, arrange for reconnaissance, make reconnaissance, complete the plan, issue the order, and supervise (BAMCIS).

c. The following planning considerations list the fire support actions during each step of BAMCIS.

d. These actions may be accomplished simultaneously or in any sequence.

e. The company fire support planner must organize to meet all these requirements in a time constrained environment.

2. Planning Considerations.

a. Begin planning.

(1) Update friendly and enemy situations.

(2) Determine available assets, allocations, and fire support coordinating measures.

(3) Obtain the battalion's target list worksheet, fire support execution matrix (FSEM), and attack guidance.

(4) Understand the battalion fire support plan and how it effects the company.

(5) Identify essential fire support tasks (EFSTs) for your company.

(6) Brief the command on the above.

(7) Receive the commander's restated mission.

(8) Receive the commander's guidance for fire support.

(9) Participate in the development of the company warning order.

(10) Issue the warning order to fire support personnel and mortar section on fire support specific issues.

b. Arrange for reconnaissance.

(1) Conduct map analysis.

(2) Plot obstacles and known enemy locations.

(3) Plot all battalion targets.

(4) List EFSTs.

(5) Advise the commander if guidance can or cannot be met with available assets and allocations.

(6) Refine battalion targets, if necessary.

(7) Determine if battalion targets support the commander's guidance.

(8) Plot targets necessary to support the commander's guidance (within the target allocation).

(9) Determine the purpose, engagement criteria, trigger points, and primary and alternate executors.

(10) Develop the target list worksheet.

(11) Develop FSEM.

(12) Brief the commander on the initial fire support plan.

c. Make reconnaissance.

(1) Ensure battlefield observation is maintained.

(2) Accompany maneuver leaders on reconnaissance.

(3) Confirm or modify the plan.

(4) Verify target locations, trigger points, and primary and alternate observation plans.

d. Complete the plan.

(1) Modify the plan as necessary after reconnaissance.

(2) Brief the commander on the scheme of fires.

(3) Emphasize observer movement, observation post requirements, and triggers.

(4) Receive fire support plan approval.

(5) Transmit the target list worksheet and coordination requirements to the battalion fire support coordination center and the company mortars section.

(6) Brief fire support personnel on the fire support plan.

e. Issue the order.
   (1) Participate in the company order brief.
   (2) Ensure fire support representatives and the mortar section leader attend the order brief if possible.

f. Supervise.
   (1) Conduct rehearsals.
   (2) Conduct inspections (as required).
   (3) Continue to refine targets and triggers for actual location, ground reconnaissance, or new enemy information.
   (4) Continuously update and coordinate the plan as necessary.

Suggested Fire Support Coordinator Standing Operating Procedure

1. Suppression.

a. Immediate suppression/immediate smoke is provided by the indirect fire support agencies in the following order of precedence:

- Naval gunfire.
- Artillery.
- 81mm mortars.
- 60mm mortars.

b. The most responsive asset is the company's own 60mm mortars.

c. The 60mm mortars can be used to suppress/screen until another agency can provide fires.

2. Call for Fire.

a. The standard calls for fire will be used by all personnel and attachments.

b. See Call for Fire Format Card on pages 183–184 and Close Air Support Briefing Form on pages 191–194.

3. Priority Targets.

a. The fire support coordinator (FSC) will designate priority targets.

b. Subordinate units may request that targets be shifted or a new one be designated.

c. Final approval of targets is with the FSC.

4. Smoke.

a. Normally, screening/obscuration fires, to include 60mm mortars and M203 smoke, must be authorized by the FSC.

b. The company must give an estimate of the time needed for smoke when it is requested.

5. Illumination.

a. Normally, employment of illumination is authorized for day-light marking of targets for aircraft.

b. Normally, illumination at night must be authorized by the FSC. This includes 60mm mortar illumination, 40mm white star parachutes, and white star parachute pop-ups.

Fire Support Techniques

1. General Considerations.

a. Universal times will normally come from the global positioning system or time hacks from high frequency (HF) radio frequencies of 5.000, 10.000, 15.000, 20.000, and 25.000 megahertz (MHz).

b. Time on target (TOT) is the exact minute at which the first aircraft's bombs will hit the deck. For example, if bombs are to land at 2136, say ***TOT is 36***.

c. Marking with white phosphorus, red phosphorus, and smoke should be timed to impact 30 seconds prior to TOT. Illumination should impact 45 seconds prior to TOT.

2. Laser Employment Consideration.

a. Laser use is normally coordinated by the forward air controller (FAC).

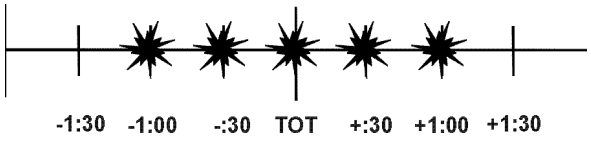
b. The pilot must be within 30 degrees left or right of the laser line from the FAC to the target before designating laser-guided munitions.

c. The pilot can be at any aspect from the laser line for marking.

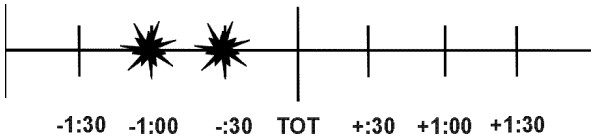
d. Direct fire will be coordinated by the FAC and company commander using tracers and/or smoke from M203s.

3. Procedures for Suppression of Enemy Air Defenses.

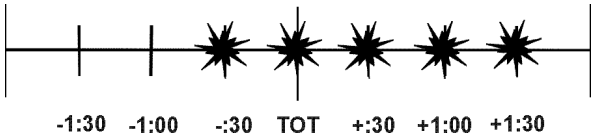
a. Continuous suppression of enemy air defenses (SEAD). Indirect fires impact at -1 minute, -30 seconds, TOT, +30 seconds, or +1 minute.



b. Interrupted SEAD. Indirect fires impact at either -1 minute or -30 seconds.



c. Other combinations of fires must be explicitly delineated on a timeline with TOT being used as zero. For example, to surprise a target using air, the call for fire to the firing agency tells them to mark at -30 seconds and suppression at TOT, +30 seconds, +1 minute, and +1 minute 30 seconds or any other combination. To avoid fratricide, all fires delivered after TOT should be ***at my command***.



4. Company Fire Support Coordinator Considerations.

a. Maintain situational awareness of locations and status of fire support assets and missions. (See the sample Company Fire Support Board on page 167.)

b. Ensure a forward observer reports both the location of the target and of the company mortar position to the fire support coordination center (FSCC) when employing 60mm mortar during SEAD missions.

c. Report maximum ordinate of rounds at the range being fired which is taken from the 60mm mortar tabular firing table (whiz wheel).

d. Coordinate all company direct fires with FAC when using helicopters.

e. Ensure direct fire information is not passed to FSCC.

Company Fire Support Board

Our Location_____ **TOT**_____

Target Suppression Location	**Target Marking Location**	**Mark**
60MM _____	_____	_____
ISUP ISMK FFE AF	SUPP SEAD	(Continuous, interrupted, other)
81MM _____	_____	_____
ISUP ISMK FFE AF	SUPP SEAD	(Continuous, interrupted, other)
Artillery		
ISUP ISMK FFE AF	SUPP SEAD	(Continuous, interrupted, other)
Naval Gunfire		
ISUP ISMK FFE AF	SUPP SEAD	(Continuous, interrupted, other)

Locations

60s	**81s**	**Artillery**	**Naval Gunfire**
_____	_____	_____	_____
	_____	_____	_____

AP/IP **Final attack heading:** _____**magnetic azimuth**
(circle if applicable)

_____

60s _____

81s _____

ARTY _____

NGF _____

CAS _____

QUICK FIRE SUPPORT PLAN

FIRE PLAN APPLE SUPPORTING 3/8 ORIGINATOR _____ MODIFICATION BY_____
1240 H-HOUR _____ SHEET _____ OF _____ DATE/TIME GROUP _____

TARGET INFORMATION

	(a)	(b)	(c)	(d)	(e)
LINE	**TARGET NO.**	**DESCRIPTION**	**LOCATION**	**ALT ASL M/FT**	**REMARKS**
1		Bunker	420267	160	
2	AD0421	AT Rocket	422260	220	
3	AD3093	OP	421261	180	
4	AD3094	OP	409271	170	
5					
6					

FRONT

SCHEDULE

	(f)	(g)	(h)	(i)
LINE	**ORG**	**FIRE UNIT**	**TIMINGS**	**REMARKS**
1	1/12	B	AD3093 48 (a)	(a) 50% delay 50% VT
2	1/12	B	AD3094 48 (a) AD3011 48 (a)	(b) Delay
3				
4				
5				
6				

BACK

CALL FOR FIRE ELEMENTS

1. Observer Identification.

Example: ***You*** (call sign)***, this is me*** (call sign).

2. Warning Order.

a. Type of mission.
   (1) Adjust fire.
   (2) Fire for effect.
   (3) Suppression.
   (4) Immediate suppression.
   (5) Suppression of enemy air defenses.

b. Size of element to fire (optional).

c. Method of target location.
   (1) Grid (standard default if method not specified).
   (2) Polar.
   (3) Shift from a known point.

3. Target Location.

a. Grid is used for a 6- or 8-digit coordinate (an 8-digit grid preferred).

b. Polar is used for observer to target direction, distance, and up/down vertical shift (if greater than 30 meters).

c. Shift used for observer to target direction, left/right lateral shift, add/drop range shift, and up/down vertical shift (if greater than 30 meters).

4. Target Description.

a. Type.
b. Size.
c. Activity.
d. Degree of protection.
e. Shape.

5. Method of Engagement.

a. Type of adjustment.
   (1) Area fire (default).
   (2) Precision fire (registration or destruction missions).
b. Danger close (within 600 meters of friendly forces).
c. Mark.
d. Trajectory.
   (1) High angle (default for mortar).
   (2) Low angle (default for artillery).
e. Ammunition. High explosive projectile/fuze quick will be used as the default if no other ammunition is specified.
   (1) Projectiles include—
      - High explosives (HE).
      - Antipersonnel (APERS).

- Improved conventional munitions (ICM).
- Illumination (ILLUM).
- Tactical riot control agent (CS).
- Smoke (SMK).
- White phosphorus (WP).
- Cannon launched guided projectile (CLGP) (Copperhead).

(2) Fuzes include—

- Quick (Q).
- Delay (D).
- Variable time (VT).
- Mechanical time (Ti).
- Base detonating (naval gunfire) (BD[NGF]).

(3) Volume of fire.

f. Distribution.

(1) Parallel (default for mortars).

(2) Circular (default for artillery).

(3) Open.

(4) Converged.

(5) Special.

6. Method of Fire and Control (optional).

a. Method of fire.

(1) One gun in adjust (default).

(2) Platoon.

(3) Section.

(4) Left or right by piece.

b. Method of control. (Artillery will be fired when it is ready if no other method of control is specified.)

(1) At my command.

(2) Cannot observe.

(3) Time on target (TOT).

(4) Close air support TOT.

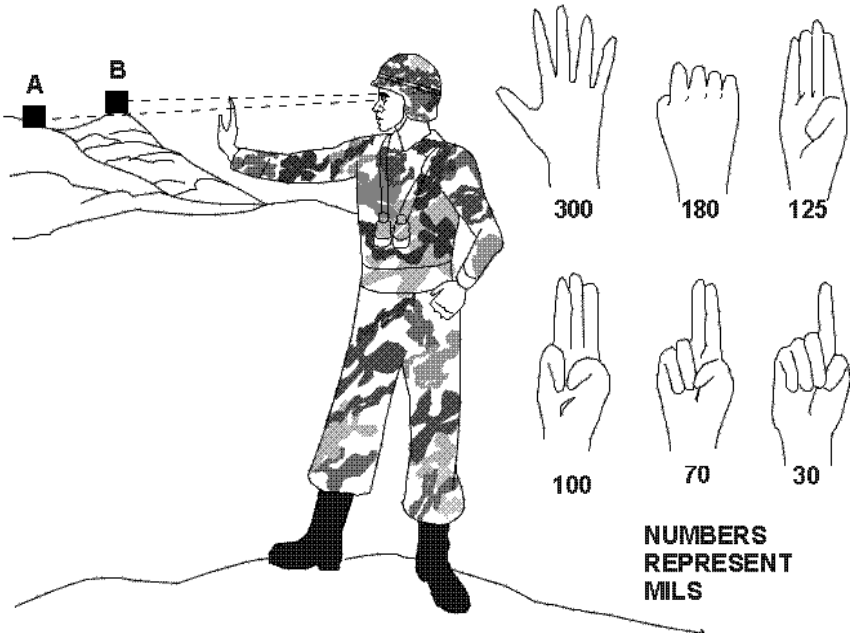
(5) Coordinated illumination.

(6) Continuous illumination.

CALL FOR FIRE PROCEDURES

1. Mil Angle Estimation.

When estimating angles in mils with the hand, the arm must be fully extended.



2. Target Location Methods.

a. Grid method is used to determine a 6-digit grid coordinate to the target (8-digit for precision fire).

b. Polar method is used to—

- Determine the observer to target (OT) direction to the nearest 10 mils (always a 4-digit number).

- Determine the OT distance to the nearest 100 meters.
- Determine the OT vertical difference in altitude to the nearest 5 meters (sent as ***up*** or ***down*** if 35 meters or greater).

c. Shift method is used to—

- Identify the known point to be used.
- Determine the OT direction.
- Determine the left or right lateral shift (W) from the known point to the target (express to the nearest 10 meters).

  W = SF (shift factor) x M (number of mils between known point and target).

  SF = Range to the known point divided by 1,000 (expressed to the nearest 10th).

  M = Measured angle in mils between the known point and the target.

- Determine the add/drop range shift from the known point to the target to the nearest 100 meters.
- Determine the up/down vertical difference in altitude between the known point and the target only if the difference is 35 meters or greater; express to the nearest 5 meters.

3. Call for Fire Examples.

a. The following table lists types of missions and examples of calls for fire for each.

Mission Type	Call for Fire Examples	Notes
Grid	A1D de L2P FFE *k* Grid 487624 *k* 2 T-72s in open, ICM *k*	Direction must be sent prior to first correction.
Polar	A1D de L2P AF Polar *k* Dir 5340, Dist 1200, Up 70 *k* Two PMPs in the open *k*	Fire direction center must have forward observer location to use polar mission.
Shift	A1D de L2P AF Shift AB3001 *k* Dir 4800, R250, Add 400, Down 95 *k* Company assembly area *k*	Both fire direction center and forward observer must have known point location.
Note: *k* means *over*		

b. A Call for Fire Format Card sample is shown on pages 183–184.

4. Smoke Employment.

Delivery System	Type of Round	Average Burn Time	Average Obscuration Length (Meters)/Round	
			Crosswind	Head/ Tailwind
155mm	HC WP M825	4 min 1–1.5 min 5–8 min	350 150 350	75 50 100–200
105mm	HC WP	3 min 1–1.5 min	250 75	50 50
81mm	WP RP	1 min 1.5–2 min	100 90–150	40 40–50
60mm	WP	1 min	75	40
5"/54	WP	1 min	150	40

5. Immediate Smoke.

a. Immediate smoke—
   - Obscures, protects, or marks smoke over small area.
   - Is more responsive, but the duration and coverage of the smoke is limited.

b. Elements of the call for fire sent in one transmission are as follows:
   - Observer identification.
   - Warning order.
   - Target location is normally directly on the target.
   - Authentication of the transmission.

c. Example call for immediate smoke: ***W5S this is HZD, immediate smoke, grid 487624, I authenticate INDIA KILO, over.***

6. Message to Observer.

a. After the fire direction center receives the call for fire, the fire direction officer will determine how the target will be attacked.

b. The attack decision is announced to the forward observer in the form of a message to observer (MTO).

c. The forward observer will read the MTO back to the fire direction center to ensure confirmation.

d. The MTO consists of the following elements:
   - Unit to fire for effect.
   - Any changes to requests in the call for fire.
   - Method of fire (number of rounds to be fired).
   - Target number.

e. Example of an MTO: ***W3D DE D2H MTO, D, ICM, three rounds, AB1001, over.***

7. Corrections.

a. After the initial round is fired, the forward observer transmits subsequent corrections until the mission is terminated.

b. The order subsequent corrections are transmitted are as follows:

- Direction.
- Danger close.
- Trajectory.
- Method of fire.
- Distribution.
- Projectile.
- Fuze.
- Volume of fire.
- Deviation.
- Range.
- Height of burst.
- Target description.
- Change in type mission control.
- Splash.
- Repeat.

8. Deviation Corrections.

a. The left or right deviation correction is determined by multiplying, in mils, the deviation between impact and the target (the deviation spotting) by the OT factor. Deviation corrections are expressed to the nearest 10 meters.

Left or right deviation correction in meters = Deviation spotting (to nearest 5 mils) x OT factor

b. A deviation correction less than 30 meters is considered minor and is ignored during the mission.

c. The OT factor is the expressed distance from the forward observer to the target in meters divided by 1,000.

$$\text{OT factor} = \frac{\text{Expressed OT distance}}{1000}$$

d. If an OT distance is greater that 1,000 meters, express the distance to the nearest thousand meters. If an OT distance is less than 1,000 meters, express the distance to the nearest hundred meters. For example:

The OT distance is 1,500 meters, which is expressed as 2,000 meters.

Deviation spotting is L45.

$$\text{OT factor} = \frac{2000}{1000} = 2$$

The deviation correction = 45 x 2 = 90 meters. The diviation correction is R90.

The OT distance is 650 meters, which is expressed as 600 meters.

Deviation spotting is R60 mils.

$$\text{OT factor} = \frac{600}{1000} = .6$$

The deviation correction = 60 x .6 = 36 meters, which expresses to 40 meters.

9. Range Corrections.

a. Range corrections consist of the commands ***add*** (move burst away from observer) and ***drop*** (move burst closer to the observer).

b. Range corrections are transmitted in multiples of 100 meters; 50-meter corrections may be used when entering fire for effect.

c. Range correction methods.

(1) Successive bracketing.

(2) Hasty bracketing.

(3) One-round adjustment.

(4) Creeping fire (used during danger close missions; not corrections greater than 100 meters).

d. Minimum bracketing guide.

OT Distance	Initial Bracket
0–100 meters	100 meters
1000–2000 meters	200 meters
2000 meters and beyond	400 meters

10. End of Mission Statement.

a. Refinement (optional).

b. Record as target (optional).

c. End of mission.

d. End of surveillance (to include battle damage assessment).

e. Example end of mission statement: ***R10, +30, record as target, end of mission, target neutralized, estimate 5 casualties, over.***

CALL FOR FIRE FORMAT CARD

1.
"_____de _____ AF/FFE/SEAD [POLAR (or) SHIFT] (TGT #) _____**k**"

2.
"GRID _____k"
(POLAR) "DIR _____ DIS _____ U/D _____ VA + / - _____ **k**"
(SHIFT) "DIR _____ L/R _____ + / - _____ U/D _____ **k**"

3.
(TARGET DESCRIPTION) "_____ "
(METHOD OF ENGAGEMENT) " _____ "
[DANGER CLOSE/MARK/HIGH OR LOW ANGLE/AMMO (HE/Quick Standard)/VOL OF FIRE]
(METHOD OF FIRE AND CONTROL)"_____ **k**"
[When READY is Standard/AMC/CANNOT OBS/TOT/COORD or CONT ILUM/CAS TOT]

SUPPRESSION, IMMEDIATE SUPPRESSION, AND IMMEDIATE SMOKE

"_____de _____ SUPP/IMMED SUPP/IMMED SMK"
"(TGT #) _____ **k**"
"GRID _____**k**"
(POLAR) "DIR _____ DIS _____ U/D _____ VA + / - _____ **k**"
SHIFT (TGT #) "DIR _____ L/R _____ + / - _____ U/D _____ **k**"

MESSAGE TO OBSERVER
"MTO _____ _____ _____ rounds _____ _____ OUT"
(unit to fire) (changes) (# of rounds in FFE) (TGT #) (other)

FRONT

SPOTTINGS			CORRECTIONS			OT DISTANCE - OT FACTOR:	
RNG	DEV	HOB	L/R	+/-	U/D	RND #	NOTES

BACK

CLOSE AIR SUPPORT

Close Air Support Control Procedures

1. General Considerations.

Typically, close air support (CAS) briefings are presented in the "9-line brief" format. (See pages 191–194.) This format is used when detailed coordination is required. However, if Marines need immediate air support and they are unfamiliar with the 9-line brief, they should establish communication with the aircraft and then talk it on to the target. Appendix K provides a description of CAS aircraft capabilities.

2. Air Support Requests.

Air support can be requested from either the direct air support center (DASC) or from the air officer in the fire support coordination center (FSCC). Immediate air support is normally requested from the DASC via the tactical air request net (high frequency [HF]). Communications may be established with the DASC on the tactical air traffic control net, tactical air direction (TAD) net, or direct air support net. Marines must also establish a location and frequency (TAD net) for the aircraft to contact them. If UHF/VHF communications have not been established, tactical air control party (TACP) (FM) nets can be used. If unable to contact the DASC, communications are established with the FSCC via any available net. Since the

DASC and the FSCC are normally linked, contact with the FSCC will allow contact with the DASC's air officer. Marines need to provide either the DASC or the FSCC with the following information:

- Who they are.
- Where they are.
- What they need.

3. Terminal Control.

Once communication is established with the supporting aircraft, the pilot must acquire the target as quickly as possible since the aircraft will have limited time on station. The requesting unit must facilitate the pilot's acquisition of the target by providing the following information.

a. Reference large areas/objects that the pilot will be able to see and then work down to smaller areas/objects.

   Requesting unit: ***See the road you are circling over? Okay. Follow that road north for about eight clicks and you will see a prominent hill mass just to the east of the road. I am located on the north side of the hill. Friendlies are generally located to my south and west and the bad guys are on the east side of the road and to my north.***

b. Reference the exact position in order to orient the pilot.

   Requesting unit: ***From my position you will see an open area to my immediate north and a deep draw that runs to the east out of the open area. There is an enemy platoon dug in on the finger that is just north of the draw. Do you see that?***

c. Continue to develop the situation as required. The pilot knows where the friendly forces are located and could potentially engage the target at this time. Pass any other pertinent information that would be helpful to the pilot.

Requesting unit: ***There are a couple of heavy machine gun vehicles in the treeline on the northern edge of the clearing. Request that you engage these first and then the infantry. Call me rolling in with your direction of attack.***

d. Wait for the pilot to assimilate all the information and formulate the plan of attack.

Pilot: ***I am rolling in from the southeast, about five miles from your position . . . wings level.***

Requesting unit: ***Cleared hot.***

"Wings level" means that the pilot is ready to drop bombs on the target and is waiting for permission. Permission is indicated by a "cleared hot" from the requesting unit. Before a unit gives permission to the aircraft, it must ensure that the aircraft is pointed at the target area and not at the requesting unit.

e. Provide any corrections to the second aircraft (the wingman) after the first aircraft (lead) drops its bombs.

Requesting unit: ***From lead's hits, east 100 meters.***

f. Instruct the aircraft to re-attack the target and continue to give refinements.

Requesting unit: ***You are cleared for an immediate re-attack. From dash two's hits, northeast 200, try to hit the top of finger.***

g. Continue to control the aircraft in this fashion until they are "bingo," which means they are out of fuel and must leave.

h. Provide a detailed debrief on what the aircraft destroyed and if it was effective.

Close Air Support Briefing Form

If a significant surface threat to the aircraft does not exist, a general situation brief and target location may be all that is required for the aircraft to engage the target. If the briefing format is used, pass the brief in a slow, concise manner and "unkey" the radio after every three lines for a couple of seconds.

Aircraft check-in procedures are extremely important to establish the flow of information between aircraft and controllers. The close air support (CAS) check-in briefing format is used when checking in with terminal controllers.

The CAS briefing form (9-line briefing form) shown on page 191 is used to pass data to the pilot. A typical 9-line brief for a fixed-wing aircraft's CAS mission might sound as follows:

> ***Georgia, 315 left, 7.5. . . . 750, 4 BMPs on road, TP 011798. . . . WP, SW 1400, egress east then south to Kentucky. . . . ZSU 23-4 2000 meters north of target. Final attack heading 360-030. . . . Time on target 25.*** If the aircraft understood all that you said and doesn't have any questions, you would hear: ***Roger 25.***

(Aircraft transmits to controller)

Aircraft: "_____, this is _____"
(controller call sign) (aircraft call sign)

1. Identifiication/mission number: "_____"

NOTE: Authentication and appropriate response suggested here. The brief may be abbreviated for brevity or security ("as fragged" or "with exception").

2. Number and type of aircraft: "_____"

3. Position and altitude: "_____"

4. Ordnance: "_____"

5. Time on station: "_____"

6. Abort code: "_____"
(if applicable)

CAS Check-In Briefing Form

Omit data not required; do not transmit line numbers. Units of measure are standard unless otherwise specified.

*Denotes minimum essential information required in a limited communication environment. **Bold** denotes readback items when requested.

Terminal controller: "_____, this is _____"
(aircraft call sign) (terminal controller)

*1. **IP/BP**: "_____"

*2. Heading: "_____" (magnetic). "Offset _____ (left/right)"

*3. Distance: "_____"

*4. Target elevation: "_____" (in feet MSL)

*5. Target description: "_____"

*6. **Target location**: "_____"
(latitude/longitude or grid coordinates or offsets or visual)

7. Type mark: "_____" Code: "_____"
(WP/laser/IR/beacon) (actual code)
Laser to target line: "_____degrees"

*8. **Location of friendlies**: "_____"

Position marked by: "_____"

9. "Egress _____"

Remarks (as appropriate): "_____"

(Threats, Hazards, Weather, Restrictions, Ordnance Delivery, Attack Heading, Danger Close, SEAD)

Time on target: "TOT _____"

OR

Time to target: "Stand by _____ plus _____ . . . Hack."

CAS Briefing Form (9-Line Briefing Form)

Line 1. IP/BP. Initial point is used for fixed-wing aircraft. It is the 5–15 nautical mile run-in to the target. A battle position is used for rotary-wing aircraft. It is 3,000–5,000 meters from the target. It is a large area (1000 x 1000 m or >) from which a rotary-wing aircraft engages the target. In some instances, an informal airspace coordination area (ACA) may have to be established to allow the rotary-wing aircraft to run-in closer (500–1500 meters) to the target.

Line 2. Heading. The heading is given in degrees magnetic from IP (or center of the BP) to the target. The Offset (left or right) indicates the side of the IP to target line that aircrews can maneuver in while in the target area. Saying ***degrees magnetic*** after the number is not necessary—degrees magnetic is understood.

Line 3. Distance. The distance from the IP/center of the BP to the target. It is given in nautical miles to the nearest tenth (e.g., 12.3 nautical miles) to fixed-wing aircraft and in meters to the nearest hundred (e.g., 3200 meters) for rotary-wing aircraft. Saying ***nautical miles*** after the number is not necessary—nautical miles are understood.

Line 4. Target elevation. The target elevation is given in feet above mean sea level. If the map contour interval is in feet, take the elevation directly from the map. If the map contour is in meters, convert it to feet.

Line 5. Target description. The target description contains the number, type of target, and degree of protection. It is a brief, concise description of the target. It includes target activity and configuration that may assist its identification. For example, ***4 APCs on road, stationary. . . . Bunker complex. . . . Tank column in open, moving north to south.***

Line 6. Target location. The target location is a 6-digit grid coordinate. Target location can be given as a UTM grid coordinate or as latitude and longitude. Any Marine Corps CAS aircraft can accept a UTM grid coordinate.

Line 7. Type mark. The type of mark used: e.g., WP (white phosphorus), RP (red phosphorus), laser (include 4-digit code), illumination on the deck, HE, mirror flash. If no mark is available, the pilot is guided onto the target using available references (e.g., roads, streams, open areas, prominent terrain).

Line 8. Location of friendlies. Cardinal direction (north, south, east, west) and distance (in meters) from the target to the nearest friendly position, which is frequently the forward air controller's position. Example: ***SW 1500***.

Line 9. Egress. Instructions the aircraft will follow to exit the target area after engaging the target. It includes direction to turn out of the target area and a control point to which the aircraft will fly. Use the word "Egress" before giving egress instructions. Example: ***Egress east, then south to Georgia***.

Remarks. If applicable, additional threats, hazards, weather, final attack heading, artillery gun target lines, etc., can be given here.

Time on target. Time on target (TOT) is the synchronized, universal clock time when ordnance will hit the target. There is no time "HACK" for TOT. TOT is the preferred towing method. The Naval Observatory (DSN 762-1401) or a global positioning system (GPS) can provide a common time reference. If neither is available, the terminal controller can still execute a TOT mission by synchronizing time using a watch as a reference. It is passed to the aircraft as a number of minutes past the hour (e.g., 1624 would be 24 and communicated as ***Time on target 24***).

Time to target. Time to target (TTT) is the number of minutes and seconds after the "HACK" that ordnance will hit the target (e.g., 4 minutes would be passed as 4 plus 00). Immediately after the minutes and seconds are passed, *HACK* is said. The pilot punches a stopwatch in the aircraft and prepares to put bombs on the target at the requested time. Example: ***Stand by for the time to target. . . . Time to target 4 plus 00. . . . HACK.***

Note: "HACK" indicates that all participants start the countdown.

Amplifying remarks. Anything else that is pertinent to the mission must also be passed to the pilot. If a further explanation of the target area will assist the pilot in locating the target, that information is passed after the TOT/TTT has been passed. There is no format for this information. Communicate with the pilot using plain language.

Appendix A

Machine Gun Employment

1. General Considerations.

a. Type of support.
   (1) General support.
   (2) Direct support.
   (3) Attached.

b. Mission statement.
   (1) Suppress.
   (2) Neutralize.
   (3) Destroy.

c. Offensive employment.
   (1) Close support fires.
   (2) Long-range fires.
   (3) Flank protective fires.
   (4) Fires in support of consolidation.

d. Defensive employment.
   (1) Final protective lines (FPL).
   (2) Principle direction of fire (PDF).

e. Tactical employment considerations.
   (1) Pairs.
   (2) Interlocking fires.
   (3) Coordination of fires.
   (4) Mutual support.
   (5) Defilade.
   (6) Enfilade.
   (7) Protection.

2. Range Cards.

a. A range card is a rough terrain sketch that serves two purposes.
   (1) Record of firing data.
   (2) Document for defensive fire planning.

b. Two copies are prepared.
   (1) One copy is passed up the chain of command to assist in the preparation of the unit's fire plan sketch.
   (2) The other copy stays with the gun(s) to assist in the potential turnover of a firing position to another gun team.

c. Walking the FPL.

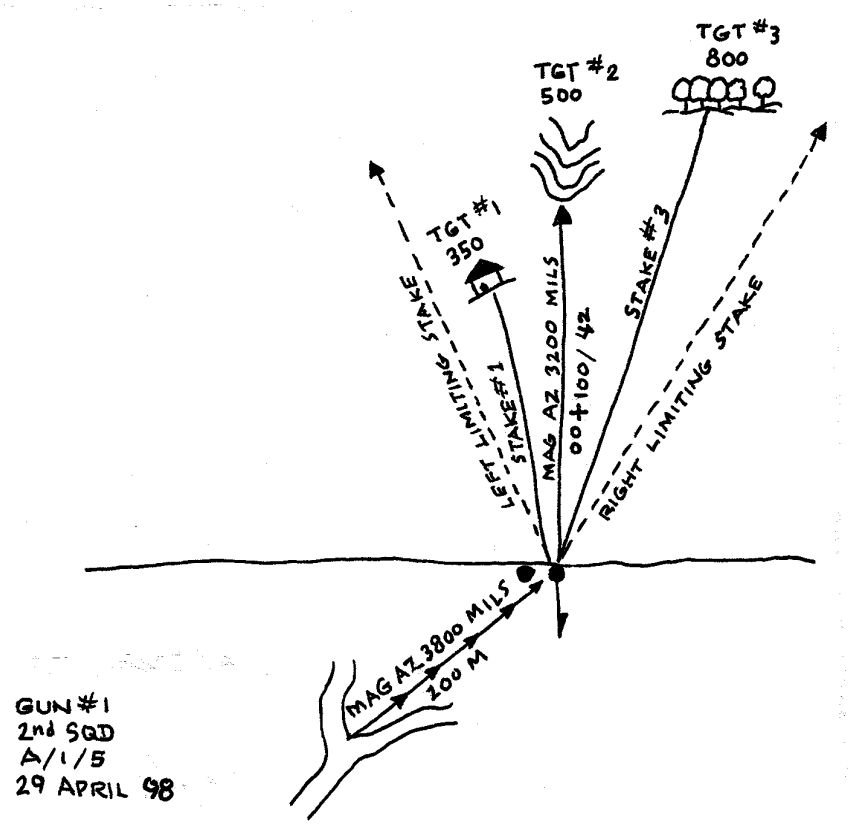
(1) Walk whenever practical and after the machine guns are set in firing positions to cover assigned sectors of fire.

(2) Conduct to ascertain the extent of grazing fire and dead space (the latter must be noted on the range card and covered by another weapon system).

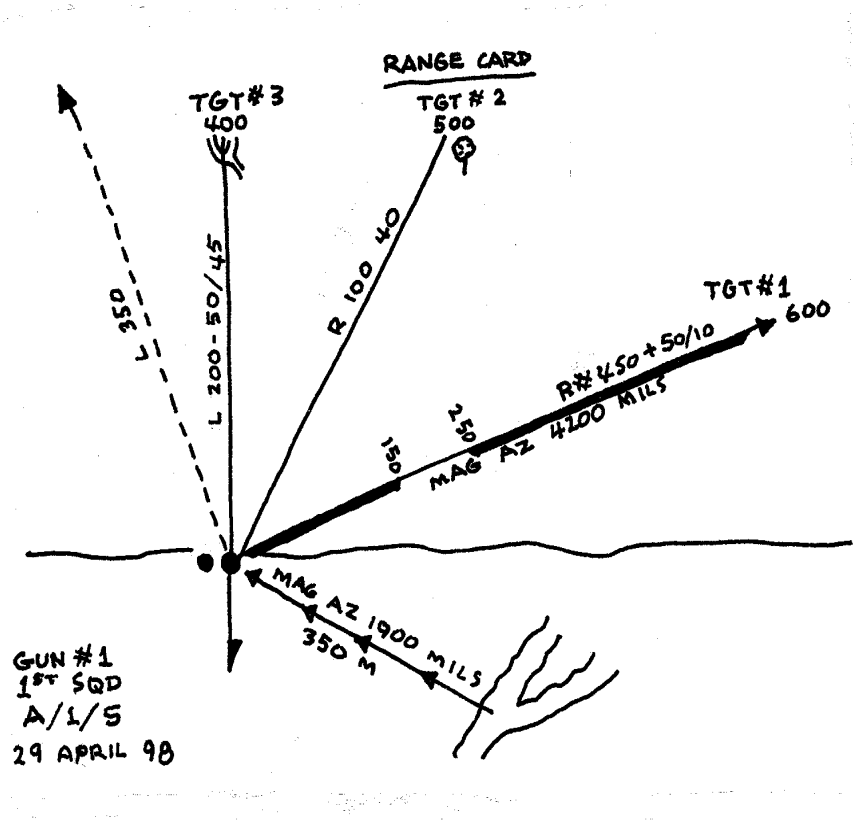
(3) Follow the steps below when walking the dead space:

- The gunner places himself behind the gun, sets his sight on the limit of grazing fire (600 meters for M240G and 1,000 meters for M2), and lays the gun on an aiming point 600 (or 700) meters distant along the FPL.
- The team leader walks the FPL using a standard measured pace.
- When the team leader drops off into a space where the gunner can no longer see him from the shoulder down, the gunner signals “mark” either by hand and arm signals or by tugging on a line the team leader has in his hand. When the team leader reappears, a second tug or signal is given. When there is no more grazing fire, a signal is given and the team leader returns.
- The team leader records on his pace card the number of paces he has covered to each point. This is continued until the team leader reaches the limit of grazing fire for the weapon.
- This information is then incorporated into the range card (samples follow).

(4) Machine gun range card (PDF).

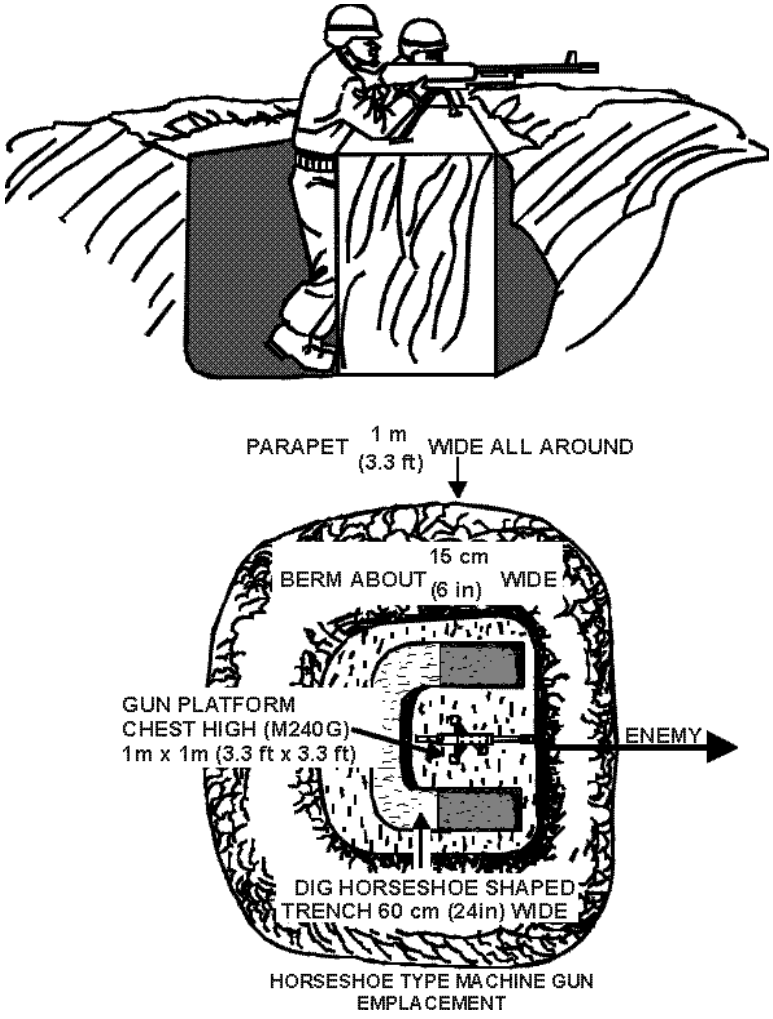


(5) Machine gun range card (FPL).



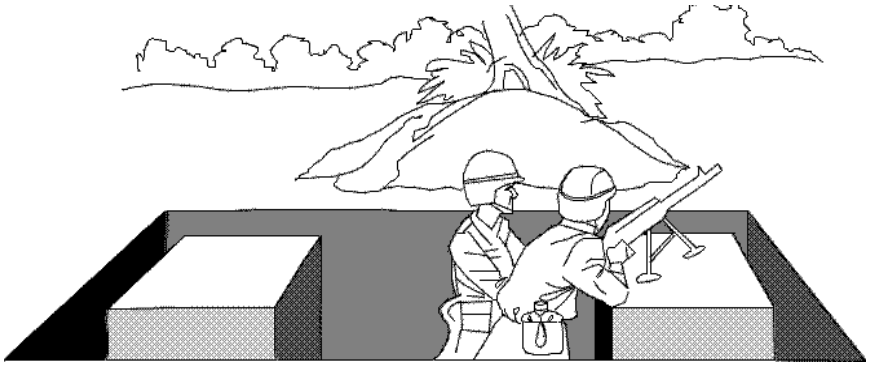
3. Machine Gun Emplacements.

a. Horseshoe type machine gun emplacement.

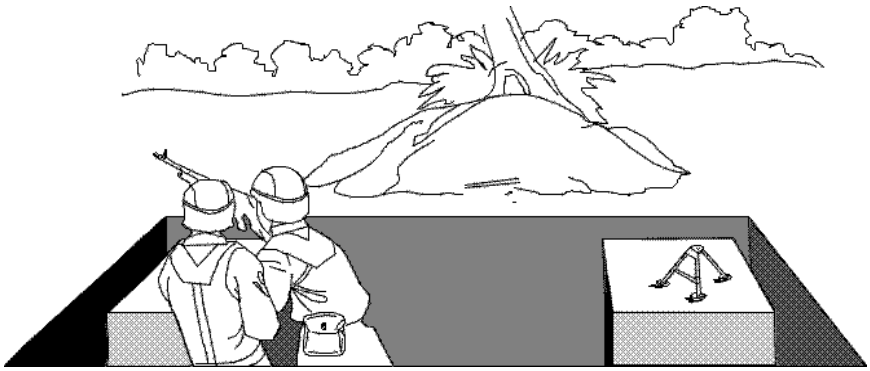


b. “T”-shaped firing position.

(1) Firing primary sector.



2) Firing secondary sector.



Appendix B

Weapons Handling

Weapons handling procedures provide a consistent and standardized way for a Marine to safely and confidently load, unload, and employ individual small arms during training and combat.

1. Safety Rules.

These rules apply to all weapons at all time and must never be violated.

Rule 1—Treat every weapon as if it were loaded.

Rule 2—Never point a weapon at anything you do not intend to shoot.

Rule 3—Keep finger straight and off the trigger until you are ready to fire.

Rule 4—Keep weapon on *SAFE* until you intend to fire.

2. Weapons Conditions Codes.

A weapon's readiness and safety status is described by one of four conditions. The steps in the loading and unloading process take the weapon through four specific conditions that indicate the weapon's readiness for live fire. Always clear a weapon before placing it into **condition 4**. Always clear a weapon if the firer is not sure what condition the weapon is in and after **condition 1** prior to going back into any other condition.

a. General weapons condition codes.

Condition 1—Ammunition must be in a position to be fired, the safety must be engaged.

Condition 2—Ammunition must be in position to be fired, the weapon's action must be closed, the hammer must be forward. (This condition only applies to weapons that have single-action external hammers.)

Condition 3—Ammunition is in position to be chambered, the chamber is empty, the action is closed, the safety is on (off for M249s and M240Gs).

Condition 4—All ammunition is removed, the chamber is empty, the action is closed, the safety is on (off for M249s and M240Gs).

b. M9 9mm pistol condition codes.

Condition 1—The weapon is loaded and ready to fire, magazine is inserted, round is in the chamber, the hammer is not cocked, the ambidextrous safety is on.

Condition 2—Not applicable to the M9 pistol.

Condition 3—The slide is forward on an empty chamber, ambidextrous safety is on with a full magazine loaded in the weapon.

Condition 4—The magazine is removed, pistol is free of ammunition, slide is forward on an empty chamber, ambidextrous safety is on.

c. M16A2 rifle condition codes.

Condition 1—Magazine is inserted, round is in the chamber, bolt is forward, weapon is on ***SAFE***.

Condition 2—Not applicable to the M16A2.

Condition 3—Bolt is forward on an empty chamber, loaded magazine is in, safety is on.

Condition 4—Magazine is out, bolt forward on an empty chamber, safety is on.

d. M249 squad automatic weapon (SAW) condition codes.

Condition 1—Ammunition is in position on the feed tray (or magazine is inserted), bolt is to the rear, safety is on.

Condition 2—Not applicable to the M249.

Condition 3—Ammunition is in position on the feed tray (or magazine is inserted), chamber is empty, bolt is forward, safety is off.

Condition 4—Feed tray is clear of ammunition (magazine is removed), chamber is empty, bolt is forward, safety is off.

3. Commands.

Unload	Clear the weapon and place the weapon in **condition 4**.
Load	Place the weapon in **condition 3**.
Make ready	Place the weapon in **condition 1**.
Fire	Engage targets.

Cease fire	Stop firing.
Unload, show clear	Allow the chamber to be checked by a second individual prior to going to **condition 4**.

4. *Unload* Execution.

To execute ***unload***, taking the weapon from **condition 1** to **condition 4** (belt-fed technique), perform the following steps:

- Take the weapon off of ***SAFE***.
- Pull the cocking handle to the rear.
- Put the weapon on ***SAFE***.
- Open the feed tray cover.
- Remove all ammunition and belt links.
- Lift the feed tray and inspect the chamber to ensure that no ammunition is present.

Appendix C

Nuclear, Biological, and Chemical Defense

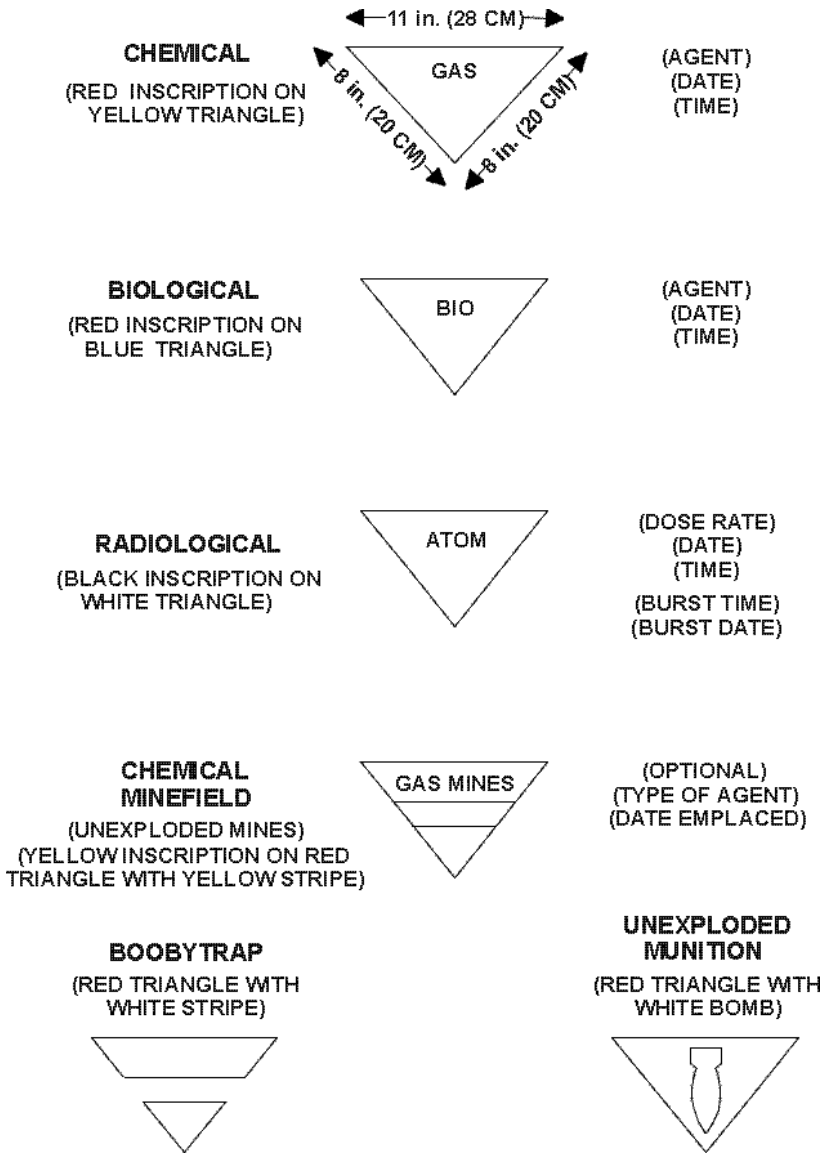
1. Warning.

The battalion's primary means of control of unit nuclear, biological, and chemical (NBC) defense is the NBC Warning and Reporting System. This system prescribes basic defensive procedures to follow during stated conditions and is based on progressive phases of NBC alerts.

a. Condition white: all clear.
b. Condition yellow: attack imminent.
c. Condition red: actual attack.

2. NBC Markers.

a. Known contaminated areas are marked to indicate a hazard as shown in the following figure.
b. The written marker side is positioned to be read by anyone entering the area.


11 in. (28 CM)
CHEMICAL
(RED INSCRIPTION ON YELLOW TRIANGLE)
GAS
8 in. (20 CM)
8 in. (20 CM)
(AGENT)
(DATE)
(TIME)
BIOLOGICAL
(RED INSCRIPTION ON BLUE TRIANGLE)
BIO
(AGENT)
(DATE)
(TIME)
RADIOLOGICAL
(BLACK INSCRIPTION ON WHITE TRIANGLE)
ATOM
(DOSE RATE)
(DATE)
(TIME)
(BURST TIME)
(BURST DATE)
CHEMICAL MINEFIELD
(UNEXPLODED MINES)
(YELLOW INSCRIPTION ON RED TRIANGLE WITH YELLOW STRIPE)
GAS MINES
(OPTIONAL)
(TYPE OF AGENT)
(DATE EMPLACED)
BOOBYTRAP
(RED TRIANGLE WITH WHITE STRIPE)
UNEXPLODED MUNITION
(RED TRIANGLE WITH WHITE BOMB)

3. Required Reports.

The NBC Warning and Reporting System includes the chemical downwind message and the required reports.

a. NBC 1, Observer's Report (details of an attack) is sent as a FLASH priority message.

BRAVO	Position of observer.
CHARLIE	Direction of attack from observer.
DELTA	Date-time group of attack.
ECHO	Illumination time or length of attack.
FOXTROT	Location of attack.
GOLF	Means of delivery.
HOTEL	Type of burst or agent/height of burst.
JULIETT	Flash to bang time.
KILO	Crater diameter.
LIMO	Nuke burst cloud angle width (5 minutes after burst only).
MIKE	Cloud top or bottom angle or height at H + 10.

b. NBC 2, Evaluated Data Report.

ALFA	Strike serial number.
DELTA	Date-time of the attack.
FOXTROT	Location of attack.

GOLF	Means of delivery.
HOTEL	Type of burst.
NOVEMBER	Estimated yield.
YANKEE	Downwind direction of hazard.
ZULU	Effective windspeed/downwind distance of zone 1.

c. NBC 3, Immediate Warning of Expected Contamination Report.

ALFA	Strike serial number.
DELTA	Date-time of attack.
FOXTROT	Location of attack.
HOTEL	Type of burst or agent/height of burst.
NOVEMBER	Estimated yield.
ROMEO	Area of expected contamination.
YANKEE	Downwind direction of hazard.
ZULU	Effective windspeed/downwind distance of zone 1.

d. NBC 4, Monitoring and Survey Results Report.

QUEBEC	Location of reading.
ROMEO	Dose rate.
SIERRA	Date-time of reading.

e. NBC 5, Area of Actual Contamination Report (radiological, best sent as a trace or overlay).

ALFA	Strike serial number.
DELTA	Date-time group of detonation.
HOTEL	Type of burst.
SIERRA	Date-time of reading.
TANGO	H + 1 date-time.
UNIFORM	1,000RAD/HR contour line.

4. Chemical Agent Characteristics.

	Nerve		Blister	Blood	Choking
Dissemination	Aerosol or vapor	Liquid droplets	Liquid droplets	Vapor (gas)	Vapor (gas)
Detection	Automatic chemical agent alarm; chemical agent detector kit.	Chemical agent detector paper.	Chemical agent detector paper.	Automatic chemical agent alarm; chemical agent detector kit.	Automatic chemical agent alarm; chemical agent detector kit.
Symptoms	Difficult breathing, drooling, nausea, vomiting, convulsions, and sometimes dim vision.		Nitrogen mustard, no early symptoms; lewisite, searing of eyes, stinging of skin; phosgene oxime, irritation of eyes and nose.	Convulsions and coma.	Coughing, choking, nausea, headache.
Effects	Incapacitates; kills if high concentration is inhaled.	Incapacitates; kills if contaminated skin is not decontaminated rapidly.	Blisters skin; destroys respiratory tract; can cause temporary blindness. Some agents sting and form whelps on skin.	Incapacitates; kills if high concentration is inhaled.	Damages and floods lungs.

	Nerve		Blister	Blood	Choking
Dissemination	Aerosol or vapor	Liquid droplets	Liquid droplets	Vapor (gas)	Vapor (gas)
Rate of action	Very rapid by inhalation; slow through skin.	Delayed through skin; more rapid through eyes.	Blistering delayed hours to days; eye effects more rapid. Mustard, lewisite, and phosgene oxime very rapid.	Rapid.	Immediate to 3 hours.
First aid	Give nerve agent antidote injection. Artificial respiration may be necessary.		None.	Artificial respiration may be necessary.	For severe symptoms, avoid movement; keep warm.
Decontamination	None.	Flush eyes with water; decontaminate skin with M258 kit.	Flush eyes with water; decontaminate skin with M258 kit or wash with soap and water.	None.	None.
Protection	Protective mask; protective clothing.		Protective mask; protective clothing.	Protective mask.	Protective mask.

5. MOPP Levels Before Chemical Attack.

MOPP Level	Over-Garment	Over-Boots	Mask with Hood	Gloves
1	Worn open or closed based on temperature	Carried	Carried	Carried
2	Same as MOPP-1	Worn	Carried	Carried
3	Same as MOPP-1	Worn	Worn hood open or closed based on temperature	Carried
4	Worn closed	Worn	Worn hood closed	Worn

6. Selective Unmasking Procedure.

a. Select and disarm two or three Marines to test.

b. Take a deep breath and break seal for 15 seconds with eyes open.
c. Remask, clear and check the mask.
d. Wait in the shade for 10 minutes and check Marines for symptoms.
e. Break seal and take two or three breaths.
f. Remask, clear and check mask.
g Wait in the shade for 10 minutes and check Marines for symptoms.
h. Unmask in the shade for 5 minutes.
i. Remask for 10 minutes.
j. Check Marines for symptoms.
k. If no symptoms have appeared, have all Marines unmask.

Appendix D

Communications and Information Systems

1. General Rules for Radio Use.

a. Listen before transmitting.

b. Avoid excessive tuning and testing.

c. Ensure message is clear, concise, premeditated, and, if possible, previously written.

d. Speak clearly, slowly, in natural phrases, and enunciate each word. If the receiving operator must write, allow sufficient time for writing.

e. Assume the enemy is always listening.

f. Notify higher headquarters using an alternate means of communications if jamming occurs. After jamming stops, send a meaconing, intrusion, jamming, interference (MIJI) report.

g. Maintain whip antennas in a vertical position.

h. Ensure the vehicle-mounted radio is turned off before starting the vehicle.

i. Communicate directly with other leaders on the net (if possible) if the unit is in contact with the enemy. Also, communicate directly with other leaders when asking for clarification or explaining a situation.

2. Message Handling Time.

a. The following time objectives apply as a general guide. They include overall handling time from the point of origin to delivery to the addressees at the point of destination.

Precedence Category	Time Standards
Flash	Not fixed. Handled as fast as humanly possible; objective is less than 10 minutes.
Immediate	10 minutes to 1 hour.
Priority	1 to 6 hours.
Routine	3 hours to start of business the following day.

b. When taking and delivering messages via voice communications, the use of "yellow canary" message types increase speed and accuracy.

3. Field Expedient Antennas.

a. Operators use field expedient antennas to—

- Replace a damaged antenna.
- Increase the distance of their radio's signal.
- Concentrate the radio's signal in a particular direction.

b. The most common element used to construct a field expedient antenna is WD-1 communications wire, but other materials can be used (e.g., barbed wire, metal fences, bed springs, metal posts, metal windows, other types of electrical wire).

c. Formulas for constructing field expedient antennas using WD-1 type communications wire are shown in the following table:

Calculate Wire Lengths in Feet	
Wavelength	**Formula**
Quarter wave length	$\frac{225.5}{44.80\ \text{MHz}}$ = 5.03 feet or 5 feet 3/8 inches
Half wave length	$\frac{451}{57.35\ \text{MHz}}$ = 7.86 feet or 7 feet 10 1/3 inches
Full wave length	$\frac{902}{65.85\ \text{MHz}}$ = 13.7 feet or 13 feet 8 3/8 inches

d. Wire length can also be computed using the quick reference antenna length chart on page D-4 and D-5.

e. When measuring wire for the antenna, the length may have to be approximated. If a tape measure or some other measuring device is not available, cut the wire 6 to 12 inches over the length derived from the formula. This will ensure a complete half wave or full wave.

f. Some field expedient antennas are constructed using the following insulators:

Best	**Good**	**Last Choice**
Plastic	Wood	Cloth/rope
MRE spoon	Stick	550 cord
MRE pouch	Tree bark	Rags

g. Once the antenna material is connected to the radio at the antenna mount with wire, begin transmitting.

.

HF			VHF		
Operating Frequency in MHz	**1/2 Wave**	**1 Wave**	**Operating Frequency in MHz**	**1/2 Wave**	**1 Wave**
2	225' 6"	451'	30	15' 3/8"	30' 7/8"
3	150' 4"	300' 8"	32	14' 1-1/8"	28' 2-1/4"
4	112' 9"	225' 6"	34	13' 3-1/8"	26' 6-3/8"
5	90' 2-3/8"	180' 4-3/4"	36	12' 6-3/8"	25' 3/4"
6	75' 2"	150' 4"	38	11' 10-3/8"	23' 8-7/8"
7	64' 5"	128' 10-1/3"	40	11' 3-3/8"	22' 6-5/8"
8	56' 4-1/2"	112' 9"	42	10' 7-7/8"	22' 5-3/4"
9	50' 1-3/8"	100' 2-2/3"	44	10' 3"	20' 6"
10	45' 1-1/4"	90' 2-3/8"	46	9' 9-5/8"	19' 7-3/8"
11	41'	82'	48	9' 4-3/4"	18' 9-1/2"
12	37' 7"	75' 2"	50	9' 1/4"	18' 1/2"
13	34' 8-1/4"	69' 4-1/2"	52	8' 8"	17' 4-1/4"
14	32' 2-1/2"	64' 5-1/8"	54	8' 4-1/4"	16' 3-3/8"
15	30' 7/8"	60' 1-7/8"	56	8' 5/8"	16' 1-2/3"
16	28' 2-1/4"	56' 4-1/2"	58	7' 9-3/8"	15' 6-5/8"
17	26' 6-3/8"	53' 3/4"	60	7' 6-1/4"	15' 3/8"
18	25' 3/4"	50' 1-1/3"	62	7' 3-1/4"	14' 6-5/8"
19	23' 8-7/8"	47' 5-5/8"	64	7' 5/8"	14' 1-1/8"

20	22' 6-5/8"	45' 1-1/4"	66	6' 10"	13' 8"
21	21' 5-3/4"	42' 11-3/8"	68	6' 7-5/8"	13' 3-1/8"
22	20' 6"	41'	70	6' 5-1/4"	12' 10-5/8"
23	19' 7-3/8"	39' 2-2/3"	72	6' 3-1/8"	12' 6-3/8"
24	18' 9-1/2"	37' 7"	74	6' 1-1/8"	12' 2-1/4"
25	18' 1/2"	38' 1"	76	5' 11-1/8"	11' 10-3/8"
26	17' 4-1/4"	34' 8-1/4"	78	5' 9-3/8"	11' 6-3/4"
27	16' 8-3/8"	33' 4-7/8"	80	5' 7-2/3"	11' 3-3/8"
28	16' 1-1/3"	32' 2-1/2"	82	5' 6"	11'
29	15' 6-5/8"	31' 1-1/4"	84	5' 4-3/8"	10' 8-7/8"
30	15' 3/8"	30' 7/8"	86	5' 2-7/8"	10' 5-7/8"

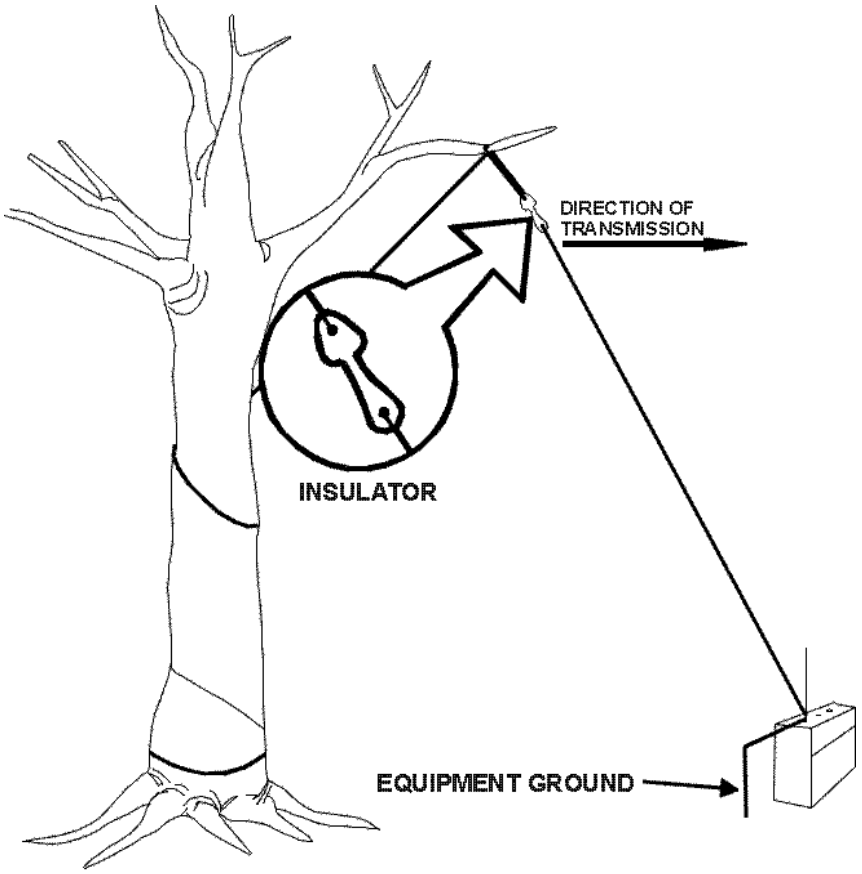
4. Sloping Wire Antenna.

a. Cut a wire to the required length (see the quick reference antenna length chart above or use the antenna length formula on page D-3).

b. Attach insulator to one end of the wire. Attach the other end of the wire to the antenna connector on the radio.

c. Tie a rope to the insulator end. Throw the rope over a tree limb. See figure on page D-6.

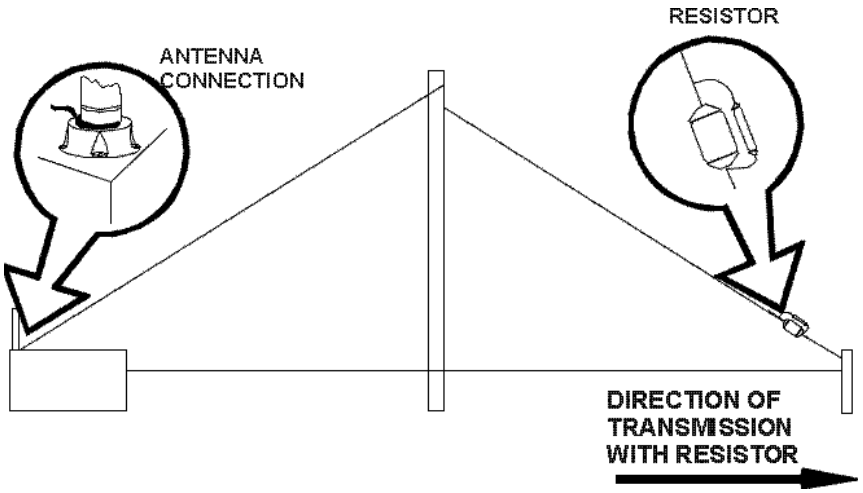
d. Pull the rope up. Make sure there is enough slack to form a slope. Take the radio and move in the direction of transmission.



5. Verticle Half Rhombic Antenna.

a. Take four wave lengths of field wire (WD-1/TT) or a multiple of two wave lengths of the operating frequency (use the quick reference antenna length chart on pages D-4 and D-5).

b. Tie an insulator, knee high, on one end of the wire. Run that end in the direction you wish to talk to. Tie some wire to the other side of the insulator and stake it down with a metal stake. Support the center of the wire with a mast, tree, pole, or whatever is handy (20-30 feet high).



c. Keep the directional line straight. Extend the near line end until it is tight. Attach the WD-1.

d. Enhance communications if material and time are available.

(1) Run a length of WD-1 from the ground stake. Stretch the wire under the antenna about a foot high. Attach the other end of the wire to the handle of the radio set. (This improves the signal. This construction is called counterpoise.)

(2) Wire a 600 ohm, 1 or 2 watt carbon resistor across the insulator at the far end; this improves the radio's punch in that direction. (The antenna is bidirectional without the resistor and unidirectional with the resistor.)

6. Jungle 292 Antenna.

This omnidirectional ground plane antenna is a regular RC-292. It is especially good for use in heavily wooded areas.

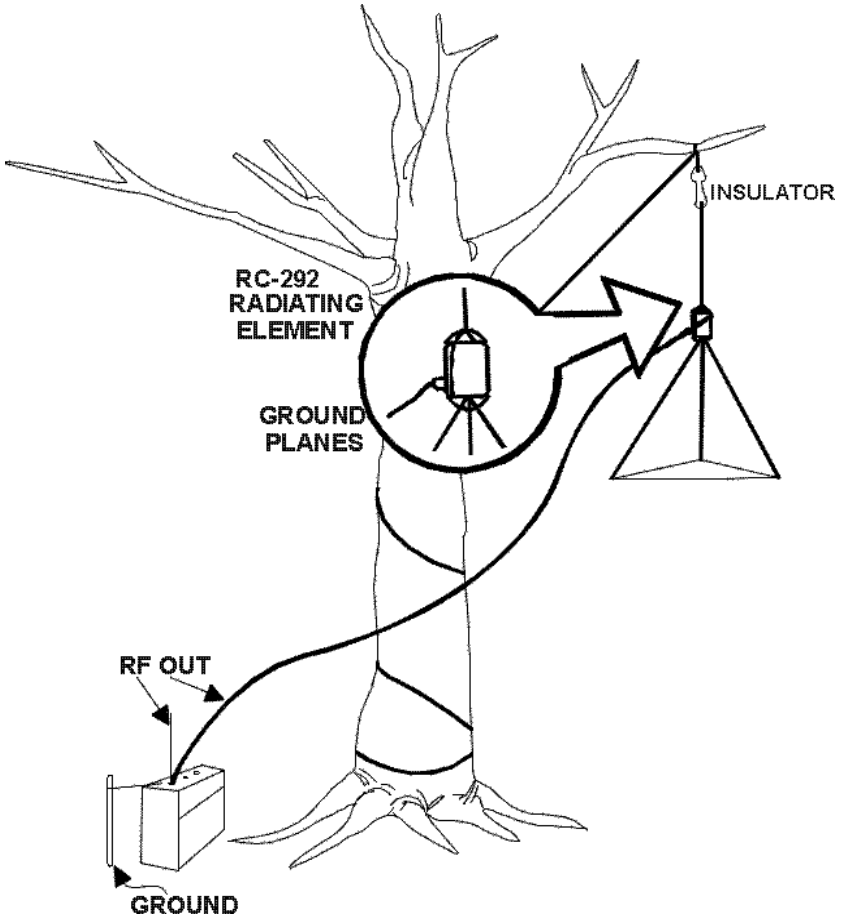
a. Compute (or use the quick reference antenna length chart on pages D-4 and D-5) and cut the four wires for a quarter wave. Build a triangle for the bottom of the RC-292. (If possible, find sticks about as long as the elements.)

b. Connect the WD-1, or coaxial lead-in, as shown in the diagram below, before pulling the antenna up in the air.

c. Use five insulators, one at each end to separate the elements. Attach an insulator to the vertical element, add a piece of rope, tie on a weight, and throw the rope over a tree limb. (The antenna can then be raised and lowered to change element lengths each time the frequency is changed.)

d. Add a rope from the bottom of the head of a stake in the ground below if you expect strong winds. (This prevents swaying and a signal that fades in and out.)

NOTE: Some types of soil absorb radio signals and reduce or eliminate radio signal output from tactical radios. To help overcome this problem, employ a counterpoise or fake ground plane. This keeps the signal from being absorbed into the ground near the radio. To construct a counterpoise for the vertical half rhombic, cut a length of communications wire equal to the distance from the radio to the end of the antenna. Strip the ends of the wire and connect one end to the chassis of the radio (i.e., the battery box latch) and connect the other end to the stake holding the antenna in place. If using a resistor, connect the counterpoise to the end of the resistor that is not connected to the antenna.


INSULATOR
RC-292
RADIATING
ELEMENT
GROUND
PLANES
RF OUT
GROUND

7. Commonly Used Infantry Battalion Radio Nets.

Radio Net	Communications Equipment	Units/Individuals on Net
Platoon Tac (VHF)	PRC-68	Platoon commander, squad leaders, attachments
Company Tac (VHF)	PRC-77, PRC-119	Company commander, platoon commanders, company mortars, attachments
Battalion Tac 1 (VHF)	PRC-77, PRC-119, MRC-110	Battalion combat operations center, company commanders, battalion mortars, heavy weapons, attachments
Battalion Tac 2 (VHF)	PRC-77. PRC-119, MRC-110	Battalion combat operations center, company commanders, battalion mortars, heavy weapons, attachments
Battalion Mortars (VHF)	PRC-77, PRC-119, MRC-110	Battalion mortars, battalion combat operations center, mortar forward observers, (81 COF) attachments
Artillery COF (VHF)	PRC-77, PRC-119, MRC-110	Artillery fire direction center, battalion combat operations center, artillery forward observers
TAR/HR (HF)	PRC-104, MRC-138	DASC, battalion combat operations center, forward air controllers
TAD/HD (UHF)	PRC-113, VRC-83	Aircraft, battalion combat operations center, forward air controllers
TACP/Local VHF	PRC-77, PRC-119	Battalion combat operations center, forward air controllers
NGF Ground Spt (HF)	PRC-104, MRC-138	Supporting ships, battalion combat operations center, spot team
SFCP/Local (VHF)	PRC-77, PRC-119	Battalion combat operations center, spot teams

8. Communications Security.

a. General Considerations.

(1) Communication security is the means or steps that Marines employ to prevent unauthorized persons from gaining military information from Marine Corps communications networks.

(2) Classification is used to specify the degree of protection required for certain information and is determined by the information's impact on national security.

(3) Classified material contains information that has been given a security classification.

(4) Communications security applies to documents or written information regardless of its form or characteristics.

b. Requirements for Handling Classified Information.

(1) Clearance. An administrative determination of a Marine's eligibility to handle classified materials of a specific classification or category.

(2) Need to know. Material a Marine must see in order to perform his/her duties.

(3) Access. Authorization to gain possession or knowledge of classified material.

c. Security Components.

(1) Emission security measures are taken to deny unauthorized persons information of value that may be derived from intercepts and analysis, thereby compromising transmissions from cryptographic equipment and telecommunications systems.

(2) Transmission security measures are designed to protect transmissions from unauthorized interception and exploitation by traffic analysis, imitative deception, and direction finding.

(3) Cryptographic security deals with the provisions of technically sound cryptographic systems and the proper

use of authorized codes, cipher devices, and machines employed for encrypting and decrypting messages.

(4) Physical security is concerned with all physical measures necessary to prevent unauthorized access to equipment, facilities, material, information, and documents and to safeguard them from espionage, sabotage, loss, damage, and theft.

d. Classifications.

(1) Top secret is the most important category and requires the highest degree of protection. If compromised it could cause exceptional damage to national security.

(2) Secret material requires a substantial degree of protection. If compromised it could cause serious damage to national security.

(3) Confidential material requires a substantial degree of protection. If compromised it could cause identifiable damage to national security.

(4) Unclassified material contains no classified information.

9. SINGARS Radio Information.

a. General Considerations.

(1) Single-channel ground airborne radio system (SINCGARS) integrated communications security (ICOM) radios provide short-range voice and data communications.

(2) These radios are available in both man-pack and vehicular-mounted configurations

(3) Cryptographic equipment has been integrated or built into the radio.

b. Characteristics.

(1) Frequency modulated (FM).

(2) Frequency range is 30.00 MHz to 87.975 MHz.

(3) Channel spacing is 25 kHz.

(4) Channels of operation: 2,320.

(5) Frequency offset ability is +/- 5 and 10 kHz.

(6) Number of preset channels are—

- Eight in single-channel mode.
- Six in the frequency hopping mode.

(7) Emissions include voice, secure voice, and digital data.

(8) Power requirement is 13.5 VDC.

(9) Radio frequency power output is—

- Low (LO): 500 microwatts.
- Medium (M): 160 milliwatts.
- High (HI): 4 watts.

(10) Rated ranges are—

- Low (LO): 0 to 330 yards.
- Medium (M): 330 yards to 2.5 miles.
- High (HI): 2.5 miles to 5 miles.

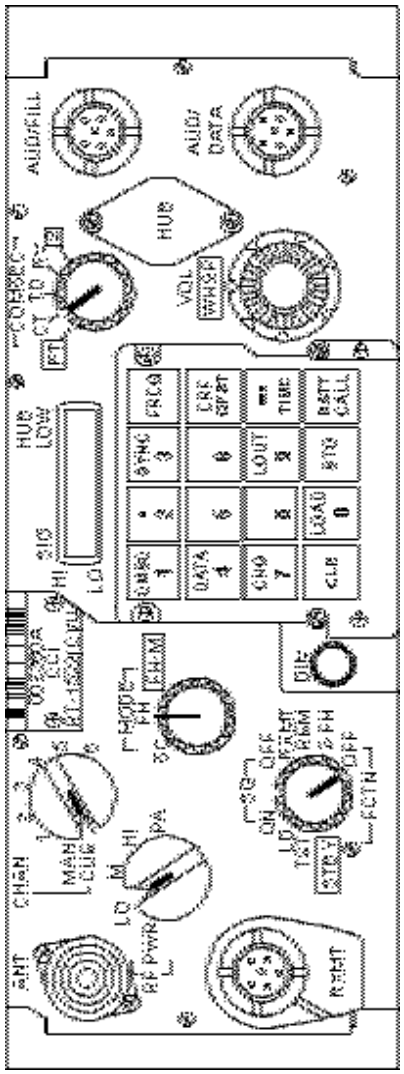
(11) Modes of operation are—

- Single channel (SC).
- Frequency hopping (FH).
- Frequency hopping master (FH-M).
- Retransmission SC to SC, SC to FH, FH to FH, electronic remote fill relay.
- Remote in either plain or cipher text with AN/GRA-39; control-monitor; or control, receiver-transmitter C-11561(C)/U.

(12) Tuning is electronic. Frequency is entered manually by using the keyboard. Up to eight SC channels and six FH channels can be loaded and later selected using channel switch.

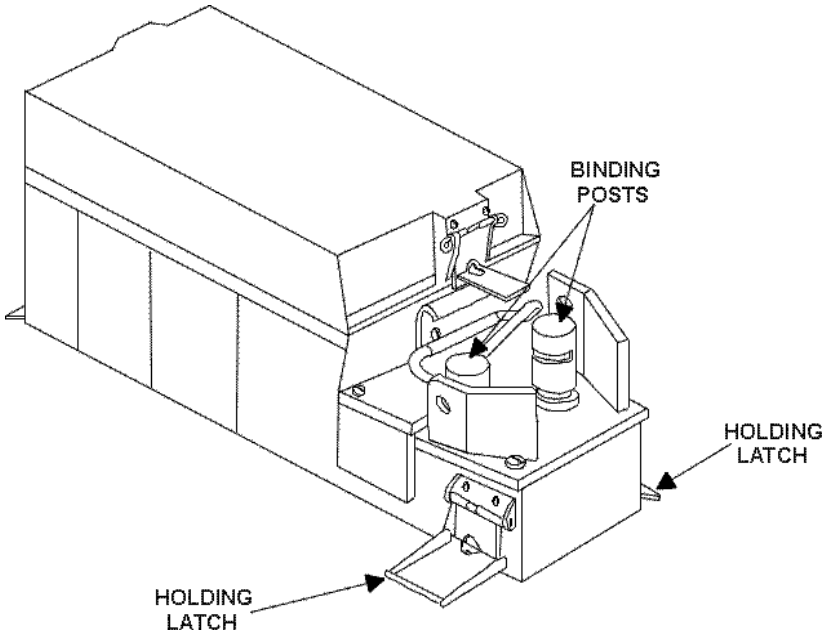
(13) Electronic counter countermeasure capability is the ability to overcome or avoid jamming. SINCGARS is capable of frequency hopping (randomly changing frequencies while maintaining communication). These systems will frequency hop at a rate of up to 6,000 frequencies per minute.

c. Components. See diagram on page D-15.



(1) Receiver transmitter: RT-1523, RT-1523B, or RT-1523C.

(2) Battery box: CY-8523A.



(3) Antenna: AS-3683A or AS-4266.

(4) Handset: H-250.

(5) Pack frame: LC-2.

d. Batteries.

(1) Power BA-5590 or BB-590 batteries supply the main power source to the radio.

(2) Holdup batteries BA-1372 or BA-5372 serve as memory batteries for the radio set.

Appendix E

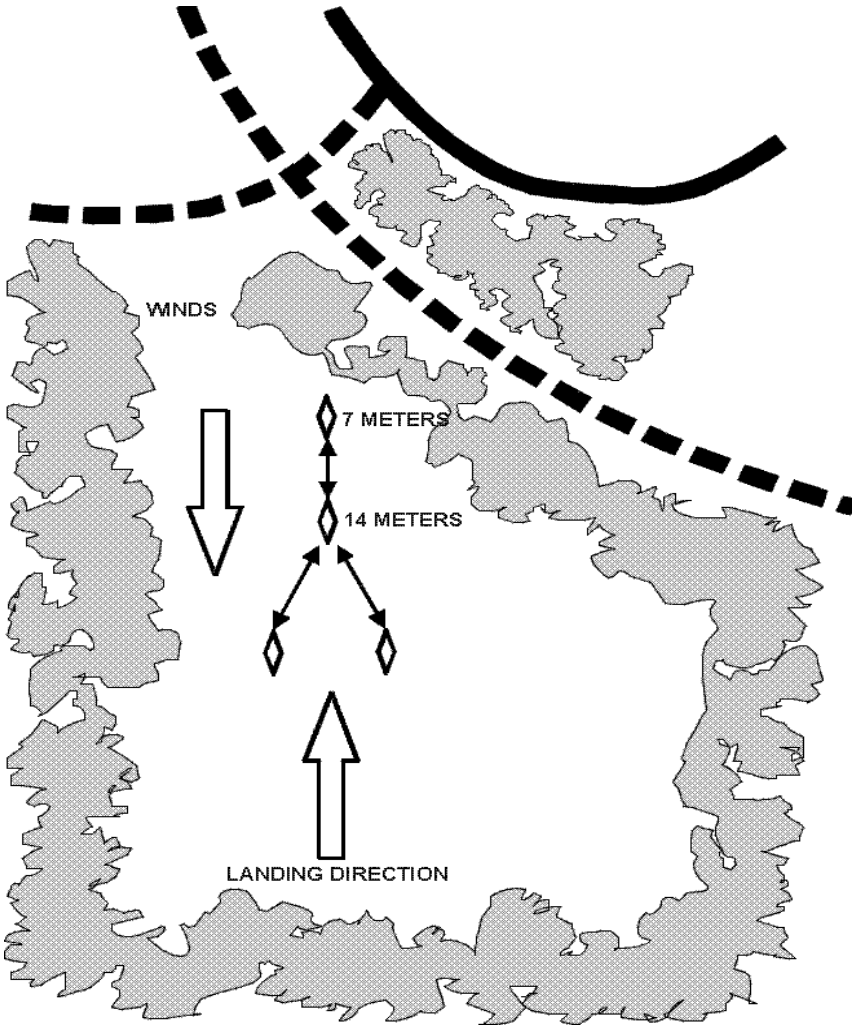
Landing Zone Brief and Markings

1. Landing Zone Brief.

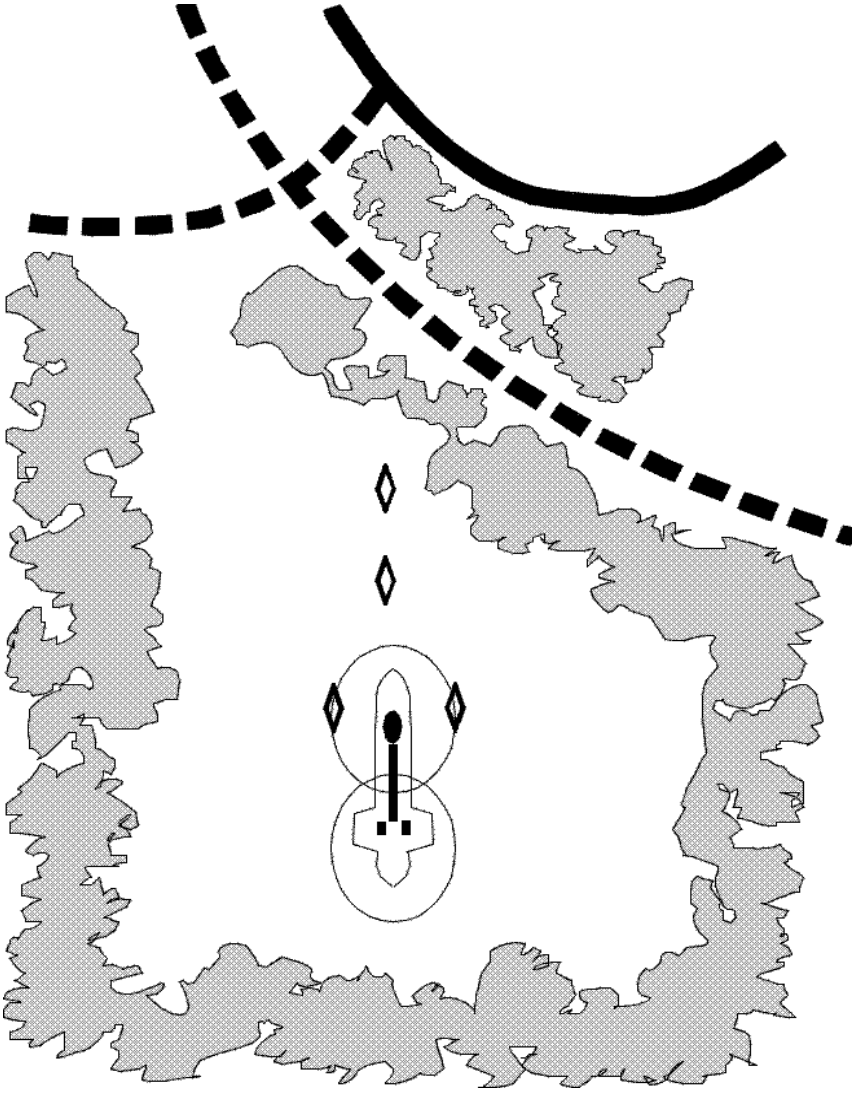
1.	MISSION NO.	_____	
2.	LOCATION: COOR/RAD/DME	_____	
3.	UNIT CALL SIGN	_____	
4.	FREQUENCY	PRI UHF _____ SEC UHF _____	FM/VHF _____ FM/VHF _____
5.	LZ MARKING	_____	
6.	WIND DIRECTION/VELOCITY	_____/_____	
7.	ELEVATION/SIZE/SHAPE	_____/_____/_____	
8.	OBSTACLES	_____	
9.	FRIENDLY POSITIONS: DIRECTION/DISTANCE	_____/_____	
10.	ENEMY POSITIONS: DIRECTION/DISTANCE	_____/_____	
11.	LAST FIRE RECEIVED: TIME/TYPE	_____/_____	
12.	DIRECTION OF FIRE/DISTANCE	_____/_____	
13.	CLEARANCE TO FIRE: DIRECTION/DISTANCE	_____/_____	
14.	APPROACH/RETIREMENT (RECOMMENDED)	_____/_____	
15.	PERSONNEL/EQUIPMENT	_____/_____	
16.	OTHER a. FORMATION b. _____	_____ _____	 _____

2. Landing Zone Markings.

a. Landing zone lighting diagram of a NATO inverted "Y" prior to landing.



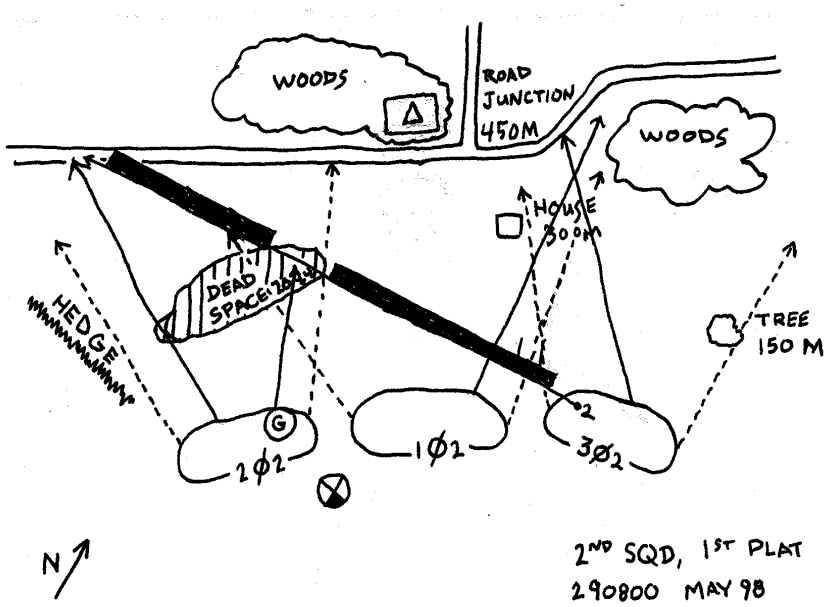
b. Landing zone lighting diagram of a NATO inverted “Y” after landing.



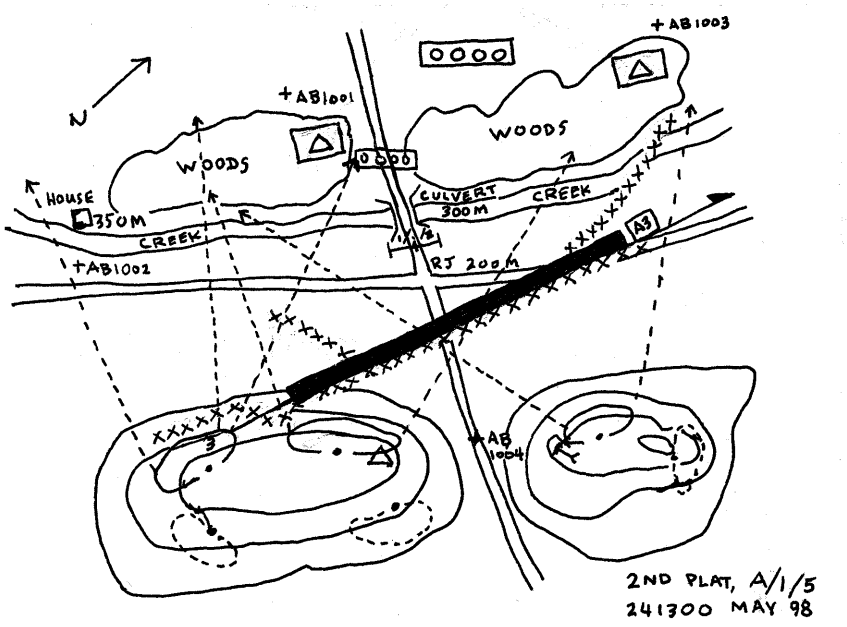
Appendix F

Sample Fire Plan Sketches

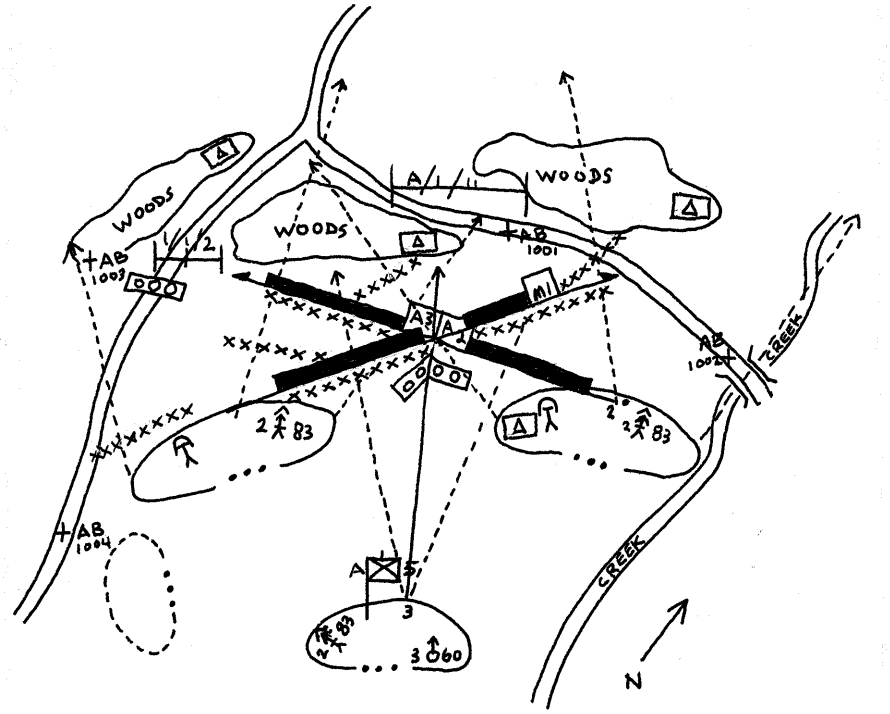
1. Squad Fire Plan Sketch.



2. Platoon Fire Plan Sketch.



3. Company Fire Plan Sketch.



Appendix G

Roadblocks and Searches

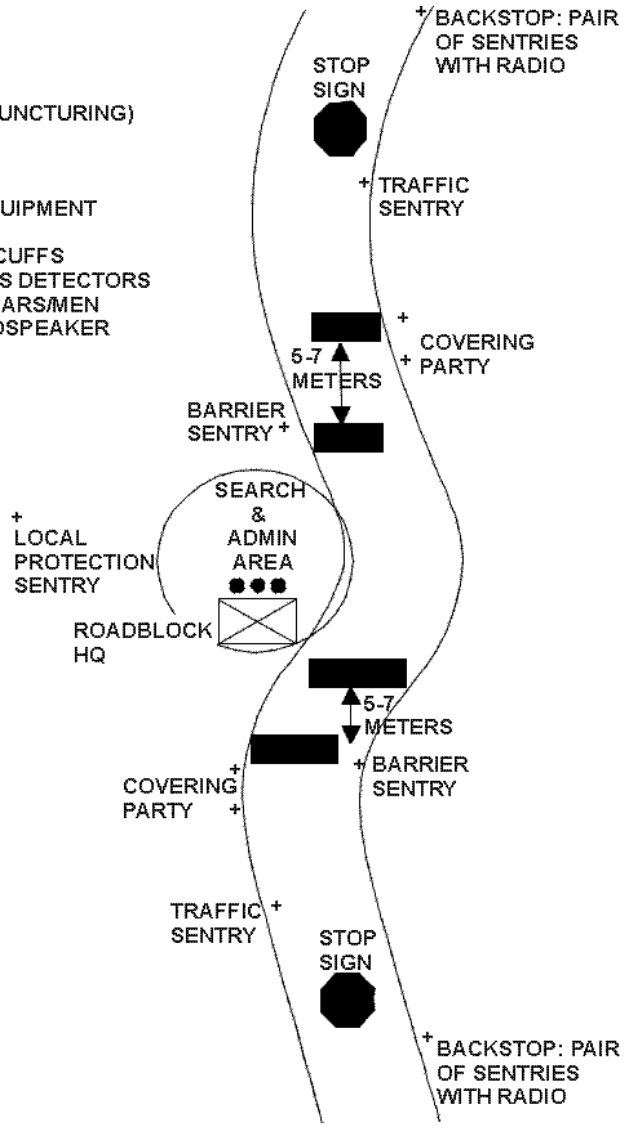
1. Types of Roadblocks.

a. Planned. A planned roadblock is a permanent or semi-permanent roadblock used on borders, outskirts of cities, or on the edge of controlled areas. They are valuable for checking identifications and as a deterrent. See page G-2 for an example of a planned roadblock.

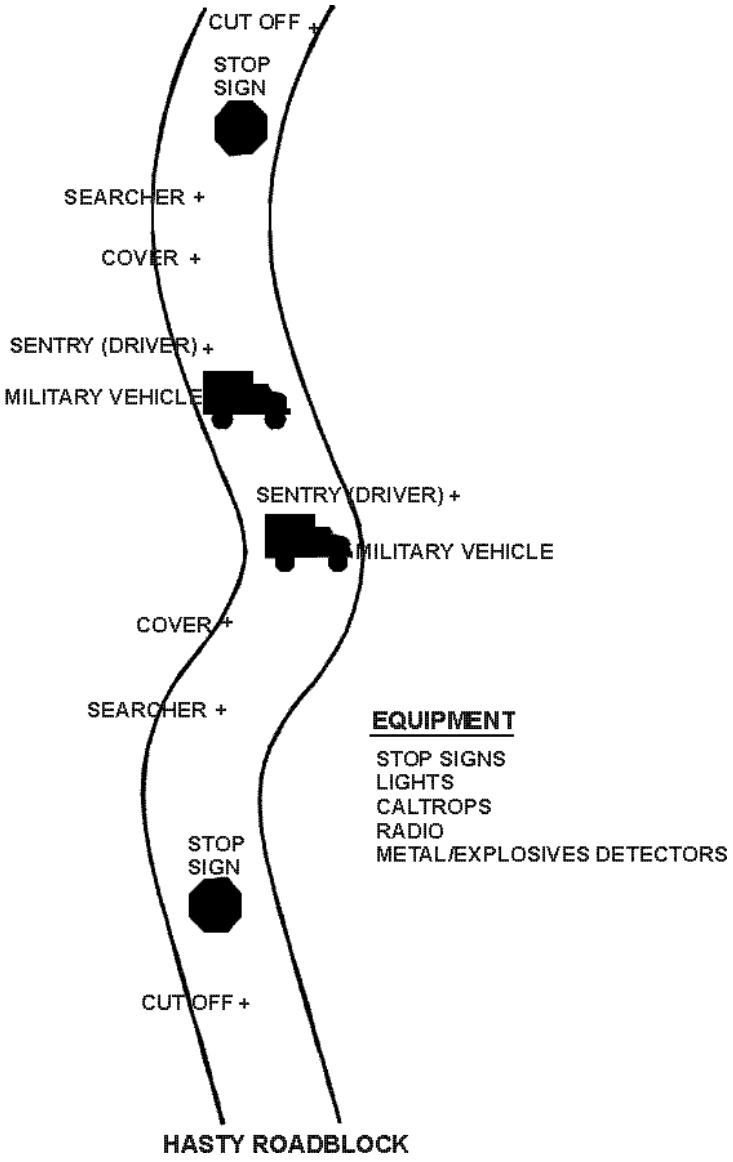
b. Hasty. A hasty roadblock is a temporary roadblock used for spot checks. Its main value is the element of surprise and it is most effective within the first half an hour of being in position—before word on its presence spreads through the local population. It can consist of two vehicles placed diagonally across a road, or a coil of barbed wire, or just traffic cones. See page G-3 for an example of a hasty roadblock.

EQUIPMENT

STOP SIGNS
BARRIERS
CALTROPS (TIRE PUNCTURING)
RADIOS
WIRE
LIGHTS
SURVEILLENCE EQUIPMENT
TENTS
HANDCUFFS/FLEXCUFFS
METAL/EXPLOSIVES DETECTORS
LIST OF WANTED CARS/MEN
MEGAPHONE/LOUDSPEAKER
WHISTLES



PLANNED ROADBLOCK


CUT OFF +
STOP SIGN
SEARCHER +
COVER +
SENTRY (DRIVER) +
MILITARY VEHICLE
SENTRY (DRIVER) +
MILITARY VEHICLE
COVER +
SEARCHER +
EQUIPMENT
STOP SIGNS
LIGHTS
CALTROPS
RADIO
METAL/EXPLOSIVES DETECTORS
STOP SIGN
CUT OFF +
HASTY ROADBLOCK

2. Planning Considerations.

a. To avoid unnecessarily annoying innocent civilians, personnel manning roadblocks should—

- Know and understand the rules of engagement.
- Know their jobs thoroughly and act quickly and methodically.
- Be polite and considerate at all times.
- Hand over suspects to civil police quickly and with minimum disturbance.

b. The following considerations may apply when planning and executing roadblocks:

(1) Concealment. Tactically site the roadblock where it cannot be seen more than a short distance away. (Sharp bends or dips in the road are ideal.)

(2) Security. Plan for enough troops to protect the roadblock. Plan for enough sentries and cover groups. Stop vehicles well short of the main search area to minimize the effect of vehicle bombs.

(3) Construction and layout. See sample layout of planned and hasty roadblocks on page G-2 and page G-3, respectively.

(4) Manning. Determine the number of troops based on the threat and the expected column of traffic. Additional personnel (i.e., civil police, female searchers, interpreters, and explosive ordnance experts) may be necessary.

(5) Surveillance. Consider the value of using early warning and night observation devices.

(6) Communications. Establish essential external and internal communications.

(7) Rule of engagement. Ensure Marines manning roadblocks are aware of their legal powers and duties with regard to search, arrest, and use of force.

3. Personal Searches.

a. The person being searched should be made to stand with legs apart in a leaning position, placing hand against a wall or vehicles. This position would prohibit movement without falling down but would allow them to be knocked over easily.

b. The searcher should always work from behind the individual being searched.

c. Two searchers should be employed, one to conduct the search and the other to cover.

4. Type of Searches.

a. A quick body search or frisk is used as a preliminary search to detect weapons that might be used against the searcher or as the usual form of search in a low threat area. (One out of 10 people may be selected for a more thorough search.)

b. A detailed body search is used as a more meticulous, detailed search of the entire person to check for weapons or contraband. The search should follow a logical sequence from top to toe, as is often done at airports. Clothing should not be patted; use a stroking movement instead. Both hands should

be used for the search. The following areas should be carefully checked:

- The hair (in or under hats).
- Armpits.
- Inside legs.
- Half-clenched hands.
- Any medical dressings.
- Any carried bags or cases.
- Walking sticks, umbrellas, and crutches.
- Shoes/boots.

5. Vehicle Searches.

Refer to the Vehicle Search Card when conducting searches.

a. Occupants. Remove occupants from vehicles and search drivers and passengers. Also, search any loose baggage in the passenger area.

b. Car trunk. Direct the driver to open and identify contents. Search—

- Under and around the spare tire.
- Tool boxes.
- Luggage.
- Partition between trunk and rear seat.
- Spare tire housing if it is under the vehicle.
- Spare tire (use tool kits to test the air in the spare tire).

VEHICLE SEARCH CARD
SYSTEMATIC SEARCH IS ESSENTIAL
INSIDE TRUNK, INTERIOR, ENGINE COMPARTMENT, OUTSIDE, UNDERNEATH
TREAT VEHICLE AS FIVE AREAS
SPARE WHEEL WELL (IF FITTED IN TRUNK)
INSIDE TRUNK ABOVE REAR WHEEL
BEHIND REAR BUMPER
CHECK SPARE WHEEL MOUNTING IF FITTED UNDER VEHICLE
IN/UNDERNEATH AND BEHIND REAR SEATS
BEHIND DOOR TRIM
ARM RESTS
BENEATH MATS/ CARPETS
DASHBOARD INCLUDING HEATER/AIR VENT PIPES
GLOVE COMPARTMENT
INSIDE HEATER
IN AND UNDERNEATH FRONT SEATS
AIR FILTER
UNDER BATTERY
BEHIND RADIATOR OR HEADLIGHT
BEHIND FRONT BUMPER
UNDER WHEEL ARCHES
WHEEL HUBS

c. Car hood. Direct the driver to open the hood and check—
   - Items taped to bulkhead or hood.
   - All containers.
   - Oil and air filters.
   - Behind sound proofing.
   - Front grill.
   - Heater.

d. Car interior. Be suspicious of strong smelling perfume. Check methodically from front to rear. Search—
   - Behind the dash.
   - Fittings such as radio/cassette player.
   - The glove compartment.
   - Behind panels; check screws.
   - Under the floor mats.
   - In, under, and behind seats and cushions.
   - Window tracks by rolling them down.
   - Toys and decorative animals.
   - Ashtrays.

e. Car exterior. Search—
   - Wheel wells.
   - Behind bumpers.
   - Headlights.
   - Hubcaps.
   - Underside.

f. Commercial vehicles. In addition to the searches listed in steps a. through e., the following searches should also be performed on commercial vehicles:

- Drivers's cab.
- Space between body and cab.
- External stowage area/bins.
- Wooden bodies, false doors, and sides.
- Space between rear double wheels.
- Wheel chocks that can be hollowed out.

Remember to—

- Include vehicle search information in the brief for setting up roadblocks and conducting personnel searches.
- Always have someone covering the searchers and those being searched.
- Make the vehicle occupant(s) open all doors and compartments.
- Use explosive detectors or dogs in searches, if possible.

Appendix H

Enemy Prisoners of War

1. General.

a. Enemy prisoners of war EPW(s) are a good source of information.

b. EPWs must be handled per international law and without losing a chance to gain intelligence.

2. Handling EPWs.

a. Search EPWs as soon as they are captured.

(1) Take their weapons and papers, except identification papers.

(2) Give them a written receipt for any personal property and documents taken.

(3) Tag EPWs' documents and personal property.

(4) Have one man guard while another searches.

(5) Re-search any EPWs that are relocated.

b. Segregate EPWs into groups: officers, noncommissioned officers, enlisted men, civilians, males, females, and political figures. Segregation helps prevent EPW leaders from organizing, giving support, and promoting escape efforts. Keep groups segregated as they move to the rear.

c. Silence EPWs.

(1) Prohibit EPWs from talking to each other. This also keeps them from planning an escape, from cautioning each other on security, and from inventing or coordinating stories that could result in lost intelligence opportunities.

(2) Report anything an EPW says to you or tries to say to another EPW to the S-2.

d. Speed EPWs to the rear. Platoons turn EPWs over to the company. Use guards to move EPWs to the rear for questioning by the S-2.

e. Safeguard EPWs when moving them to the rear.

(1) Make sure they arrive safely.

(2) Watch out for escape attempts.

(3) Ensure that they do not bunch up, spread too far out, or start diversions (e.g., fist fights). These create a chance for escape.

(4) Ensure that no one abuses them.

f. Tag EPWs and their possessions using an Enemy Prisoner of War (EPW) Capture Tag (DA Form 5976). See sample form on pages H-4 and H-5.

(1) Tag the EPW before evacuation to the EPW collection point.

(2) Tag any enemy documents and equipment. If an item was found on an EPW, his name should be on the tag, and the item should be separated from him. (See Part C of DA Form 5967.)

(3) Evacuate all documents found on an EPW with the EPW.

1 DATE AND TIME OF CAPTURE	2 SERIAL NO **XXXXXX1A**	
3 NAME		4 DATE OF BIRTH
5 RANK	6 SERVICE NO	
7 UNIT OF EPW	8 CAPTURING UNIT	
9 LOCATION OF CAPTURE (*Grid coordinates*)		
10 CIRCUMSTANCES OF CAPTURE	11 PHYSICAL CONDITION OF EPW	12 WEAPONS, EQUIPMENT, DOCUMENTS

1 DATE AND TIME OF CAPTURE	2 SERIAL NO **XXXXXX1B**	
3 NAME		4 DATE OF BIRTH
5 RANK	6 SERVICE NO	
7 UNIT OF EPW	8 CAPTURING UNIT	
9 LOCATION OF CAPTURE (*Grid coordinates*)		
10 CIRCUMSTANCES OF CAPTURE	11 PHYSICAL CONDITION OF EPW	12 WEAPONS, EQUIPMENT, DOCUMENTS

1 DATE AND TIME OF CAPTURE	2 SERIAL NO **XXXXXX1C**	
3 NAME		4 DATE OF BIRTH
5 RANK	6 SERVICE NO	
7 UNIT OF EPW	8 CAPTURING UNIT	
9 LOCATION OF CAPTURE (*Grid coordinates*)		
10 DESCRIPTION OF WEAPONS, SPECIAL EQUIPMENT, DOCUMENTS		

FRONT

Enemy Prisoner of War Capture Tag

ENEMY PRISONER OF WAR *(EPW)* CAPTURE TAG *(Part A)*
For use of this form, see AR 190-8, the proponent agency is DCSOPS

Attach this part of tag to EPW. *(Do not remove from EPW)*

1	**Search –**	For weapons, military documents, or special equipment
2	**Silence –**	Prohibit talking among EPWs for ease of control
3	**Segregate –**	By rank, sex, and nationality
4	**Safeguard –**	To prevent harm or escape
5	**Speed –**	Evacuate from the combat zone
6	**Tag –**	Prisoners and documents or special equipment

DA Form 5976, JAN 91

UNIT RECORD CARD *(Part B)*
Forward to Unit
(Capturing unit retains for records.)

Use string, wire, or other durable material to attach the appropriate section of this form to the EPW's equipment or property

DA Form 5976, JAN 91

DOCUMENT/SPECIAL EQUIPMENT/WEAPONS CARD *(Part C)*

Attach this part of tag to EPW's retained property. *(Do not remove from property.)*

As a minimum, the tag must include the following information:

- *Item 1*, date and time of capture.
- *Item 8*, capturing unit.
- *Item 9*, place of capture *(grid coordinates)*.
- *Item 10*, circumstances of capture *(how the EPW was captured)*.

DA Form 5976, JAN 91

BACK

3. Types of Searches.

a. A hasty search is a good pat down of the EPW's entire body, checking all pockets and areas where the EPW could conceal weapons or documents. Done only when time is paramount.

b. A detailed search is similar to a hasty search, but in more detail. Search EPWs thoroughly, checking for hidden pockets on the inside of the uniform, belts, and boots.

c. A strip search is the most preferred search. Strip EPWs of all clothing to ensure there are no hidden weapons, booby traps, or documents. Check all clothing for hidden compartments. Remember to return the EPW's protective gear.

Note: For female EPWs, care must be taken to ensure compliance with international law. Females search females. If none are available, the order of precedence for searchers is medical personnel, members of the clergy, and if none of the aforementioned are available, the senior officer on site.

4. Procedures for Handling and Searching EPWs.

a. Search EPWs located within an enclosed space first during a hasty search.

b. Cover all EPWs (continue to cover immediate danger areas).

c. Sweep visible weapons away from all the occupants in an enclosure.

d. Check suspected dead.

e. Flex cuff all EPWs.

f. Conduct hasty search of the dead for weapons.

g. Conduct hasty search of the living prisoners.

h. Escort living prisoners to the marshaling area where they will be detail searched and staged.

i. Detail search the dead and leave in place.

j. Mark dead once they have been searched.

Appendix I

Patrol Coordination

1. Patrol Leader.

The patrol leader ensures that the listed issues are addressed when coordinating with the following:

S-2.

- Current enemy situation.
- Terrain and vegetation.
- Weather and light data.
- Previous patrol reports.
- Aerial photos and imagery.
- Photos or information on enemy uniforms and weapons.
- Priority intelligence requirements and information requirements (information to be collected).
- Debrief (who, where, when).
- Special equipment.
- Sniper attachments.

S-3.

- Submission of route overlay.
- Current friendly situation.
- Departure/reentry of friendly lines—

- Time and place (coordinated with the forward unit commander).
- Emergency signals.

- Adjacent patrols.
- Restrictions (illumination, smoke, riot control agents, pyrotechnic).
- Required reports and reporting occasions.
- Location and time of rehearsal.
- Location and time of test firing of weapons.

Fire support coordinator.

- Fire support means available.
- Ammunition types and fuzes available.
- Priority of fires.
- Priority targets.
- Control measures (coordinated fire line and boundaries).
- Frequencies and call signs.
- Submission of fire support overlay.

S-4 (or company gunnery sergeant).

- Equipment requests.
- Time and location to draw.
- Ammunition and pyrotechnic requests.
- Transportation.

Air officer.

- Aircraft availability.
- Frequencies and call signs.

Communications officer.

- Frequency, call signs, and times when they change.
- Reporting instructions.

Weapons platoon commander.

- Attachments.
- Debrief.
- Fire support assets (60mm mortars).

Adjacent patrols.

- Identity of patrol leader.
- Identity of unit.
- Size of patrol.
- Time of departure/time of return.
- Enemy action.
- Routes (primary/alternate).
- Mission.
- Frequencies and call signs.
- Challenge and password.

2. Coordination with Forward Unit Commander.

The patrol leader ensures that the following items are coordinated with forward unit commanders in areas where the patrol may operate or pass.

Information provided.

- Identity of the patrol leader.
- Identity of the unit.
- Size of patrol (at time of departure and time of return).
- Mission of patrol.
- Time of departure and time of return.
- General area of operation.
- Patrol frequencies and call signs.

Information collected.

- Terrain and vegetation.
- Enemy situation.
- Friendly positions.
- Barrier plan.
- Fire support plan.
- Units' frequencies and call signs.
- Challenge and password.

Information coordinated.

- Location of initial rally point and return rally point.
- Location of point of departure and point of return from friendly lines.
- Departure/reentry procedures.
- Frequencies and call signs.
- Emergency signals/plans.
- Passage of information to relief.

Support requested.

- Guide through lines.
- Fire support.
- Reaction force.
- Litter team.
- Navigational aids.

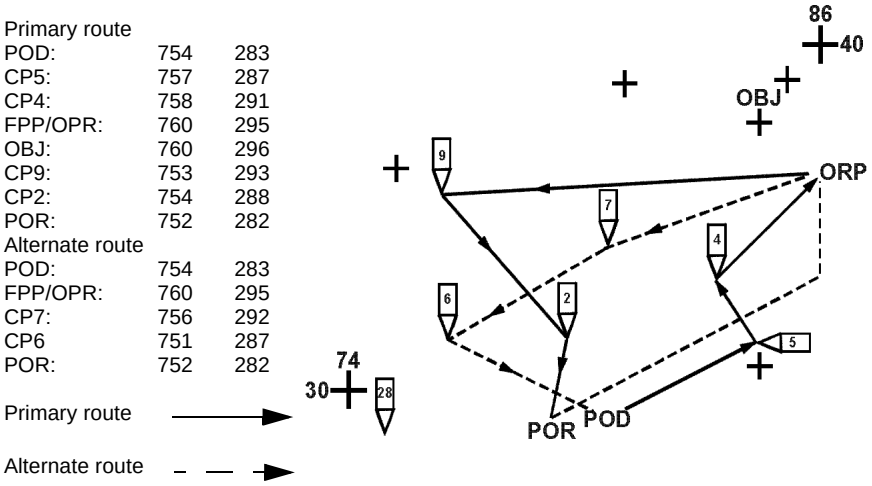
Appendix J

Example Patrol Overlay

Patrol leader:	Sgt Smith	**Map sheet:**	New River
Unit:	1st Sqd, 2nd Plt, I 3/2	**Scale:**	1:50,000
Date of patrol:	7 May 1984	**TOD:**	1845
		TOR:	NLT 0230

Patrol frequencies:		**Code words:**	
Primary:	33.60	Switching to alternate frequency:	Eagle
Alternate:	45.70	Switching to alternate route:	Blue
Call sign:	N4A		
Emergency signal:	_____		

Primary route		
POD:	754	283
CP5:	757	287
CP4:	758	291
FPP/OPR:	760	295
OBJ:	760	296
CP9:	753	293
CP2:	754	288
POR:	752	282
Alternate route		
POD:	754	283
FPP/OPR:	760	295
CP7:	756	292
CP6	751	287
POR:	752	282



Target List

	Number	Location	Description	Remarks
Checkpoint #	AB1001	756 290	Road junction	HE/WP
	AB1002	760 297	Road (objective)	
	AB1003	763 297	Road junction	VT
	AB1004	758 297	Road junction	VT
	AB1005	752 293	Hill top	HE/WP

Appendix K

Close Air Support Aircraft Capabilities and Munitions

Aircraft Capabilities

Aircraft	Ordnance Types	Maximum Load	Gun Type	Time on Station
AV-8B	All conventional unguided, Maverick	8,000 lbs	25mm, 399 rounds	30 min
F/A-18	All conventional unguided, Maverick, Walleye	13,500 lbs	20mm, 580 rounds	35 min
AH-1W	Rockets, TOW, Hellfire	2,000 lbs	20mm, 750 rounds	1 hr +30 min
A-10	All conventional unguided, Maverick	5,100 lbs	30mm, 1174 rounds	
F-14	General purpose (MK 80s) and cluster munitions	8,000 lbs	20mm, 515 rounds	
F-15	All conventional unguided, Maverick, Walleye	6,000 lbs	20mm, 512 rounds	
F-16	All conventional unguided, Maverick, Walleye	6,000 lbs	20mm, 515 rounds	
1. CAS times on station (TOS) reflect 30 minute transit to/from target area.				

Conventional Unguided Munitions

Munition	Description	Suitable Targets
MK 82	500 lb bomb	Bunkers, vehicles, troops, artillery position
MK 83	1,000 lb bomb	Bunkers, vehicles, troops, artillery position
MK 84	2,000 lb bomb	Bunkers, vehicles, troops, artillery position
MK 20 Rockeye	DPICM w/ 247 bomblets	Troops, tanks, POL site, artillery position
CBU 59 APAM	DPICM w/ 717 bomblets	Troops, med tanks, POL site, artillery position
CBU 72 FAE	Fuel air explosive	Troops, POL site, bldgs, artillery position
MK 77 napalm	Firebomb	Troops, POL site, vehicles
Rockets 2.75"/ 5.00"	Pod-launched area fire weapon	Troops, vehicles, POL site

Conventional Guided Munitions

Munitions	Description	Suitable Targets
AGM-65 Maverick	Infrared or laser-guided missile	Any point target (SAM site, APC)
Walleye	Optically-tracked 2,000 lb. bomb	Reinforced bunkers, ships
BGM 71 TOW	Wire-guided antiarmorer missile	Armor, APCs any point target
AGM 114 Hellfire	Laser-guided antiarmor missile	Any tank, any point target

1. All MK 80 series general-purpose bombs may be fitted with a—
   - High-drag fin or drogue shoot assembly allowing for low-level (below 2,000 feet) delivery.
   - Laser-guided bomb kit allowing for point target capability with a single bomb.
2. All laser-guided weapons require target designation for employment.

Appendix L

Weapons Capabilities

Weapons	Maximum Effective Range (meters)	Ammunition	Rates of Fire Rounds Per Minute		Effective Casualty Radius	Remarks
			Rapid	Sustained		
Hand grenades fragmentation M67	40	HE	N/A	N/A	15m	4-5 second fuze delay
White phosphorus M34	30	WP	N/A	N/A	35m	4-5 second fuze delay
Riot control M7A2	40	CS	N/A	N/A	25m	2 second fuze delay; functions for 20 to 60 seconds
Riot control M25A2	50	CS	N/A	N/A	5m	1.3-4 second fuze delay
Incendiary AN-M14	N/A	Thermite	N/A	N/A	Will burn through 1/2 in. of steel	2 second fuze delay; burns for 40 seconds at 4,000^{o} F
Illumination MK1	40	Illumination	N/A	N/A	Illuminates 200m	7 second fuze delay
Smoke colored M18	35	Yellow, red, green	N/A	N/A	N/A	2 second fuze delay
Pistol 9mm	50	Ball	N/A	N/A	N/A	
Rifle 5.56 M16A2	550	Ball, tracer		12-15	N/A	May be fired semiautomatic or 3 round burst.
Grenade launcher 40mm M203	150 point target 350 area target	HE, WC, WSP, HEDP, CS multiprojectile, HE bounding	Maximum effective 7-9 rounds per minute		5m	M203 is mounted under the M16AZ
Squad automatic weapon 5.56 M249	1,000	Ball and tracer 4+1 link	200	85	N/A	Fire from a linked belt or M16 magazine grazing fire 600m 3-5 round burst
Machine gun 7.62 M60E3	1,000	Ball and tracer 4+1 link	200	100	N/A	Grazing fire 600m 6-8 round burst
Machine gun 7.62 M240G	1,800	Ball and tracer 4+1 link	200	100	N/A	Grazing fire 600m 6-8 round burst
Machine gun .50 HB M2	1,830	HEDP	40+	40 rounds or fewer	2 inches of steel at 90 degrees	Grazing fire1000m designed to be fired in 3-5 round bursts

Weapons	Maximum Effective Range (meters)	Ammunition	Rates of Fire Rounds Per Minute		Effective Casualty Radius	Remarks
			Rapid	Sustained		
MK-19 40mm	1,500	HEDP TP	60	40	15m 2 in. steel	Maximum range 2,212m Minimum safe range combat-75m training-310m
Assault rocket launcher 83mm ARL SMAW	400 area 250 point HEDP 500 HEAA	HEDP HEAA, practice, 9mm tracer	N/A	N/A	7 1/2 ft. reinforced sandbags 8 in. concrete 12 in. brick 1 in. armor	9mm spotting rifle and rocket launcher are ballistically matched.
Mortar 60mm M224	M720 HE 3,500 M772 WP 3,500 M721 ILLUM 3,200	HE, WP, ILLUM	30 rounds per minute	20	HE - 27.5m WP 10m ILLUM- 500m radius 40 seconds	FPF for section 30 x 90
Mortar 81mm M252	M889 HE 5,700 M375 WP 4,500 M853A1 ILLUM 5,100	HE, WP, RP, ILLUM IR ILLUM	30 rounds per minute/ 2 minutes	15	HE–35 WP–15 ILLUM-500m 60 seconds IR ILLUM 74 seconds	M532 proximity fuze is available. The fuze will function 3-30 ft. above ground FPF for section 140 x 35 FPF for platoon 280 x 35
Howitzer 155mm M198 (towed)	14,700 chg 7 18,100 chg 7 Red 30,000 RAP	HE, ILLUM, WP, SMK, ICM, ADAM, RAAM, HD, GB, VX, CLGP Fuzes: Q,D,Ti,VT,CP	4	2	50m	FPF for battery 300 x 50
5"/54	21,887	HC, ILLUM, HE, WP Fuzes: PD, MT, VT, CVT, Delay	20	16	45m	
AT-4	300	HEAT	N/A	N/A	In excess of 17 in. of steel	Minimum range is 10m
Dragon M47	1,000	HEAT	N/A	N/A	24 in. of steel	Minimum range is 65m
TOW M220	3,750	HEAT	N/A	N/A	In excess of 25 in. of steel	Minimum range is 65m

Weapons	Maximum Effective Range (meters)	Ammunition	Rates of Fire Rounds Per Minute		Effective Casualty Radius	Remarks
			Rapid	Sustained		
LAV 25mm	2,000	HE-I, APDS target practice	200	100	Will penetrate a BMP at 2,200m	
Tank 120mm	2,200	HEAT, HEP, APDS, WP, APERS	Crew dependent		HEAT/APDS is effective against all types of armor at 2,200m	

Appendix M

Common Threat Weapon Characteristics

Weapon	Range	Guidance	Remarks
Antiaircraft Weapons			
ZSU-23-4	2,500m 3,000m	Optical track Radar track	Cyclic rate of fire 4,000 rounds per minute
SA-6	24 km	Radar	Tracked vehicle
SA-7	3.5 km	IR heat seeker	Man portable
SA-8	10 km	Radar	Wheeled vehicle
SA-9	8 km	IR heat seeker	BRDM vehicle
SA-14	4.5 km	IR heat seeker	Man portable
SA-16	5.2 km	IR heat seeker	Man portable
S-60 57mm Antiair	6 km	Radar tracked towed	4.2 km optical track
Small Arms			
AK-47, 7.62mm	400m		Asia, Middle East, China, Finland, North Korea
AK-74, 7.62mm	400m		
RPK-74, Light MG, 5.45mm	800m		
FN, 7.62mm FAL Rifle	650m		
65, 7.62mm H&K Rifle	800m		
RPD, 7.62mm light MG	800m		China, Vietnam, North Korea, Egypt, Pakistan
RPK-74, 5.45mm	800m		
SVD, 7.62mm Sniper Rifle	900m		

Weapon	Range	Guidance	Remarks
Crew-Served Weapons			
AGS-17, 30mm Auto Grenade Launcher	1,730m		
SG43/SGM Goryunov, 7.62mm Medium MG	1,000m		Middle East, Africa, Asia
KYPT, 14.5mm, HMG	2,000m		
NSV, 12.7mm HMG	2,000m		
KPV, 14.5mm MG	2,000m	Mounted on BTR-60/ 70/80, BRDM-2	
M37, 82mm Mortar	3,000m		
M43, 120mm Mortar	5,700m		
Rocket-Propelled Grenade (RPG)			
RPG-7, Rocket	300-500m		
RPG-16, Rocket	500-800m		
RPG-18, Rocket	200m		
RPG-22, Rocket	250m		
Antitank-Guided Missiles (ATGM)			
Malyutka (AT-3)	3,000m		
Fagot (AT-4)	2,500m		
Konkurs (AT-5)	4,000m		
Shturm (AT-6)	5,000m		
Metis (AT-7)	1,000m		
Kobra (AT-8)	4,000m		
Ataka (AT-9)	6,000m		
Basnya (AT-10)	4,000m		
Svir (AT-11)	5,000m		
Metis (AT-13)	1,500m		

Weapon	Range	Guidance	Remarks
Armored Vehicle Weapons			
ZSU 23, 23mm Cannon	2,500m		
125mm, Main Gun T-64, T-72, T-80	2,000–2,500m		
30mm Cannon BMP	1,800–2,000m		
Artillery			
D-30 122m Howitzer	15,400m		
152mm SP Gun, 2S5	28-33km		

Appendix N

Antiterrorism Procedures

1. Personal Protective Measures.

a. Obey security orders.
b. Know your interior guard routines.
c. Be inquisitive.
d. Remain aware of your surroundings.
e. Keep alert.

2. Personal Routines.

a. Avoid wearing uniform if possible.
b. Avoid calling each other by rank while in civilian areas.
c. Vary patronage of eating/socializing establishments.
d. Vary fitness routines and routes.
e. Keep a low profile—do not flash large sums of money.
f. Avoid taking liberty alone (use the buddy plan).
g. Avoid unsafe areas (keep to well-populated districts).
h. Check up and down streets for suspicious cars or individuals before departing.

3. Transportation.

a. Vary mode of transport if possible.
b. Always lock the car, even in a locked garage.
c. Vary times and stops if using bus, train, or subway.

d. Check under and around car before getting in.
e. Vary route/times to destinations.
f. Use unmarked vehicles if possible.
g. Never pick up hitchhikers.
h. Avoid isolated or back streets and roads.

4. Mail and Parcels.

Be aware of the following letter and parcel bomb indicators:

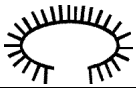
- Is the postmark or sender unknown?
- Is the handwriting of foreign style?
- Is the balance of the package unusual?
- Is the letter too heavy for its size?
- Are there protruding wires?
- Does it have grease stains or an unusual smell?
- Does it contain more postage stamps than necessary?

If any of the above indicators are encountered, do not touch! Call an explosive ordnance disposal expert.

Appendix O

Common Military Symbology

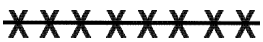
1. Basic Military Symbols.

Positions	
Battle	
Supplementary	
Strong point	

Frames	
Unit	
Command post	
Observation post	
Logistical/Medical	
Enemy unit	

Unit Sizes			
Fire team		Battalion	II
Squad		Regiment	III
Section		Brigade	X
Platoon		Division	X X
Company		MEF/Corps	X X X

Unit Types			
Infantry		Artillery	
Armor		Assault amphibious	
Light armor		Reconnaissance	
Mechanized infantry		Antitank	
Engineer		Motor transport	
Supply		Air defense	
Medical		Communications	
Maintenance		Electronic warfare	

Wire	
Unspecified	
Double apron fence	
Single concertina	

Weapons			
	Light	**Medium**	**Heavy**
Air defense gun			
Surface-to-air missile			
AT missile			
AT rocket			
AT gun			
Machine gun			
Mortar			
Howitzer			

Mines			
AP		AT	
Claymore			

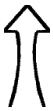
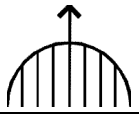
Armored Vehicles	
Cavalry vehicle	
AAV	
APC	
LAV	

Armored Vehicles (Tanks)	
Light	
Medium	
Heavy	

2. Control Measures.

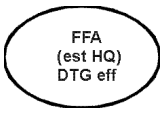
Lines			
Probable line of deployment	PLD – – – – – – PLD	Line of contact	
Line of departure	LD (dtg) —— LD (dtg)	Phase line	PL Red —— Red PL
Limit of advance	LOA —— LOA	Lateral boundary	— ‖ —

Points			
Contact point		Linkup point	
Coordinating point		Rally point	
Check point		Passage point	

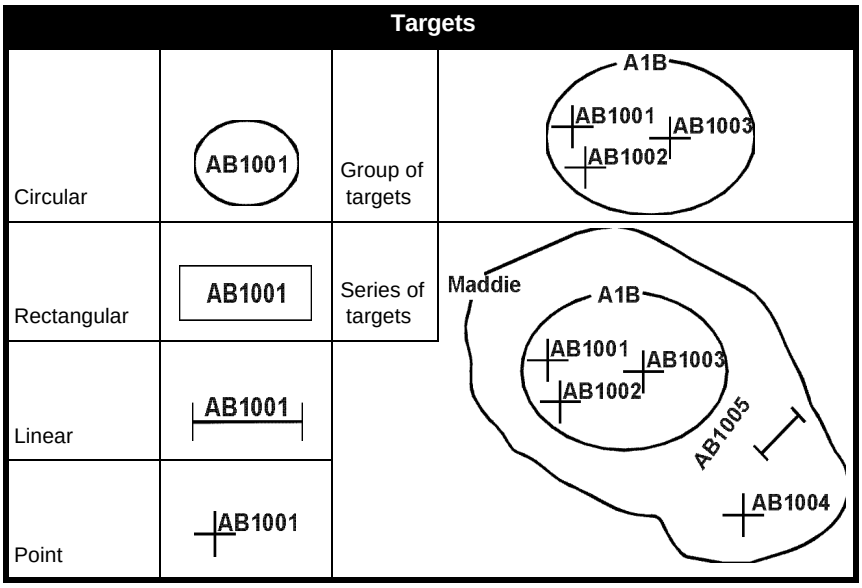
Maneuvers			
Attack position		Axis of advance	
Main effort		Air axis of advance	
Support attack		Ambush	
Objective		Direction of attack	

3. Fire Support Coordination Measures.

Fire Lines	
Coordinated fire line	CFL (est HQ) (est HQ) CFL DTG eff DTG eff
Fire support coordination line	FSCL (est HQ) (est HQ) FSCL DTG eff DTG eff
Restrictive fire line	RFL (est HQ) (est HQ) RFL DTG eff DTG eff

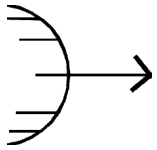
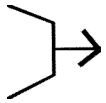
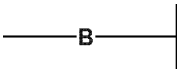
Fire Areas	
Free-fire area	
No-fire area	
Restrictive fire area	

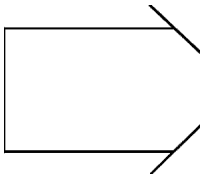
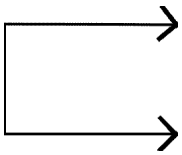
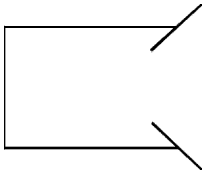
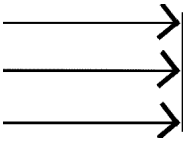
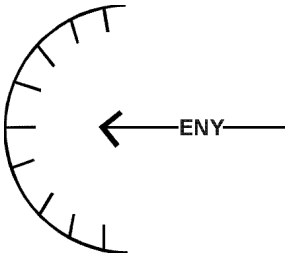
Airspace Coordination Area
ACA (EST HQ) **Min Alt/Max Alt (in Feet)** **DTG eff**

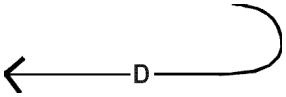

Targets
Circular
AB1001
Group of targets
A1B
AB1001
AB1003
AB1002
Rectangular
AB1001
Series of targets
Maddie
A1B
AB1001
AB1003
AB1002
AB1005
AB1004
Linear
AB1001
Point
AB1001

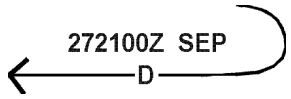
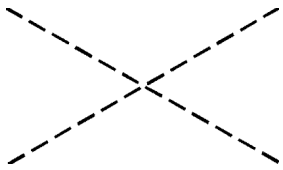
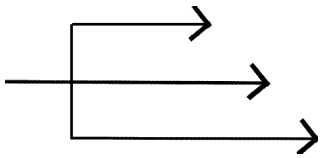
Appendix P

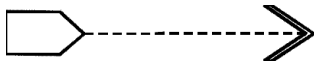
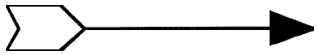
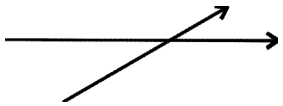
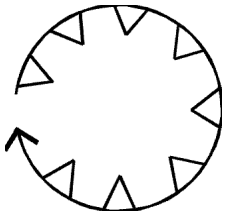
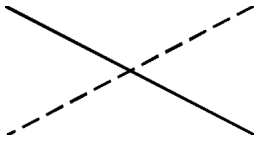
Common Tactical Terms, Definitions, and Symbols

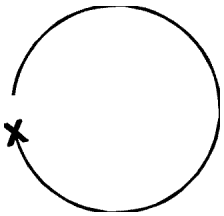
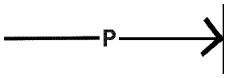
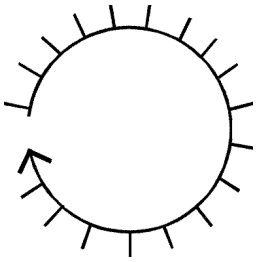
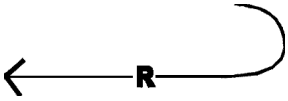
Ambush. A surprise attack by fire from concealed positions on a moving or temporarily halted enemy.	
Attack by fire. Fires employed to destroy the enemy from a distance, normally used when the mission does not dictate or support occupation of the objective. This task is usually given to the supporting element during the offensive and as a counterattack option for the reserve during defensive operations. An attack by fire is not done in conjunction with a maneuvering force.	
Block. 1. A tactical task assigned to a unit which requires it to deny the enemy access to a given area or to prevent enemy advance in a given direction or an avenue of approach. It may be for a specified time. Units assigned this mission may have to retain terrain and accept decisive engagement. 2. An obstacle effect that integrates fire planning and obstacle effort to stop an attacker on a specific avenue of approach or to prevent an enemy from exiting an engagement area.	

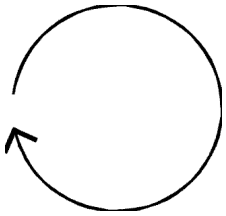
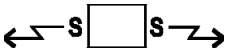
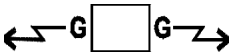
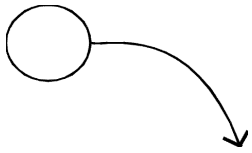
Breach. A tactical task where any means available are employed to break through or secure a passage through an enemy defense, obstacle, minefield, or fortification.	
Bypass. A tactical task which involves maneuvering around an obstacle, position, or enemy force to maintain the momentum of advance. Bypassed obstacles and enemy forces are reported to higher headquarters.	
Canalize. A tactical task used to restrict operations to a narrow zone by the use of obstacles, fires, and/or unit maneuvering or positioning.	
Clear. A tactical task to remove all enemy forces from specific location, area, or zone.	
Contain. A tactical task to restrict enemy movement.	

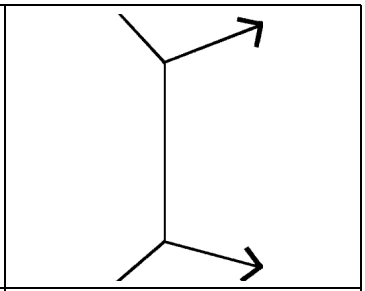
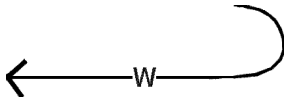
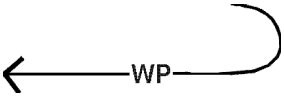
Counterattack (axis is always dashed). A form of offensive operation in which an attack by a part or all of a defending force is made against an enemy attacking force, for such specific purposes as regaining ground lost, cutting off or destroying lead enemy units, and with the general objective of regaining the initiative and denying the enemy the attainment of his goal or purpose in attacking.	
Counterattack by fire. Fires employed to destroy the enemy from a distance, normally used when the mission does not dictate or support occupation of the objective. This task is usually given to the supporting element during the offensive and as a counterattack option for the reserve during defensive operations. An attack by fire is not done in conjunction with a maneuvering force.	
Delay. Usually conducted when the commander needs time to concentrate, preserve, or withdraw forces; to establish defenses in greater depth; to economize in an area; to cover a defending or withdrawing unit; to protect a friendly unit's flank; or to complete offensive actions elsewhere. In the delay, the destruction of the enemy force is secondary to slowing his advance to gain time.	

Delay (until specified time). Usually conducted when the commander needs time to concentrate, preserve, or withdraw forces; to establish defenses in greater depth; to economize in an area; to cover a defending or withdrawing unit; to protect a friendly unit's flank; or to complete offensive actions elsewhere. In the delay, the destruction of the enemy force is secondary to slowing his advance to gain time.	
Destroy. A tactical task to physically render an enemy force combat-ineffective unless it is reconstituted.	
Disrupt. A tactical task or obstacle effect that integrates fire planning and obstacle effort to break apart an enemy's formation and tempo, interrupt the enemy's timetable, cause premature commitment of enemy forces, and/or the piecemealing of his attack.	
Fix. 1. A tactical task in which actions are taken to prevent the enemy from moving any part of his forces either from a specified location or for a specific period of time by holding or surrounding them to prevent their withdrawal for use elsewhere. 2. A tactical obstacle effect that integrates fire planning and obstacle effort to slow an attacker within a specified area—normally an engagement area.	

Follow and assume. An operation in which a committed force follows a force conducting an offensive operation and is prepared to continue the mission of the force it is following when that force is fixed, attrited, or otherwise unable to continue. Such a force is not a reserve, but is committed to accomplish specified tasks.	
Follow and support. An operation in which a committed force follows and supports the mission accomplishment of a force conducting an offensive operation. Such a force is not in a reserve, but is committed to accomplish specified tasks.	
Interdict. A tactical task which is oriented on the enemy to prevent, hinder, or delay the use of an area or route by enemy forces.	
Isolate. A tactical task given to a unit to seal off (both physically and psychologically) an enemy from its sources of support, to deny an enemy freedom of movement, and prevent an enemy unit from having contact with other enemy forces. An enemy must not be allowed sanctuary within its present position.	
Neutralize. To render enemy personnel or material incapable of interfering with a particular operation.	

Occupy. A tactical task in which a force moves onto an objective, key terrain, or other manmade or natural terrain area without opposition and controls that entire area.	
Penetrate. The breaking through of the enemy's defense and disrupting the defensive system.	
Relief in place. An operation in which, by direction of higher authority, all or part of a unit is replaced in an area by the incoming unit. The responsibilities of the replaced elements for the mission and the assigned zone of operations are transferred to the incoming unit. The incoming unit continues the operation as ordered.	
Retain. A tactical task to occupy and hold a terrain feature to ensure it is free of enemy occupation or use.	
Retirement. A form of retrograde operation; a directed, rearward movement by a force that is not in contact with the enemy and does not anticipate significant contact with the enemy.	

Secure. A tactical task to gain possession of a position or terrain feature, with or without force, and to deploy in a manner which prevents its destruction or loss to enemy action. The attacking force may or may not have to physically occupy the area.	
Security. A task to maintain surveillance; provide early warning to the main body; or impede, destroy, and harass enemy reconnaissance within its capability.	
Guard. A form of security operation whose primary task is to protect the main force by fighting to gain time, while also observing and reporting information, to prevent enemy ground observation of and direct fire against the main body by reconnoitering, attacking, defending, and delaying. A guard force normally operates within the range of the main body's indirect fire weapons.	
Cover. Shelter or protection from enemy observation that reduces the effects of enemy direct and indirect fire.	
Seize. A tactical task to clear a designated area and obtain control of it.	

Support by fire. A tactical task by which a maneuver element moves to a position on the battlefield where it can engage the enemy by direct fire to support a maneuvering force by either support by fire by overwatching or by establishing a base of fire.	
Withdrawal. A type of retrograde where a force in contact plans to disengage from the enemy and move in a direction away from the enemy.	
Withdrawal under pressure. A type of retrograde where a force disengages and moves directly away from the enemy while the enemy is attacking.	

Appendix Q

Metric Conversion Charts

1. Conversion Chart.

Multiply	By	To Obtain
Centimeters	.03281	Feet
Centimeters	.3937	Inches
Cubic feet	.02832	Cubic meters
Cubic meters	35.31	Cubic feet
Degrees	60.00	Minutes (circle)
Feet	30.48	Centimeters
Feet	.3048	Meters
Feet per minute	.01136	Miles per hour
Feet per second	.6818	Miles per hour
Gallons (U.K.)	1.201	Gallons (U.S.)
Gallons (U.S.)	.8327	Gallons (U.K.)
Inches	2.540	Centimeters
Inches	.08333	Feet
Inches	1000.00	Miles
Kilometers	.6214	Miles
Meters	100.00	Centimeters
Meters	3.281	Feet
Meters	39.37	Inches
Meters	1.094	Yards
Miles	5280.00	Feet
Miles	1.609	Kilometers

Multiply	By	To Obtain
Mils	.001	Inches
Square meter	10.76	Square feet
Square meter	1.196	Square yards
Square miles	2.590	Square kilometers
Square yards	0.8361	Square meters
Temperature (C) + 17.8	1.80	Temperature (F)
Temperature (F) -32	.5556	Temperature (C)
Yards	.9144	Meters

2. Meters to Feet or Miles.

Meters	Feet	Miles
1	3.281	
50	164.043	
100	328.087	
200	656.10	0.12
300	984.30	0.19
400	1312.30	0.25
500	1640.40	0.31
1000	3280.90	0.62
2000	6561.7	1.24
3000	9842.60	1.86
4000	13123.50	2.49
5000	16404.3	3.11
6000	19686	3.73

Meters	Feet	Miles
7000	22967	4.35
8000	26248	4.97
9000	29529	5.59
10000	32810	6.21

Appendix R

Glossary

Section I. Abbreviations and Acronyms

A&S . . . . . .assault and security
AA. . . . . antiaircraft
ADAM . . . . . artillery delivered area munitions
ALICE. . . . . all-purpose lightweight individual carrying equipment
APC. . . . . armored personnel carrier
APDS . . . . . armor-piercing discarding sabot
APERS . . . . . antipersonnel
AP-I. . . . . armor piercing, incendiary
APL. . . . . assistant patrol leader
aslt. . . . . .assault
AT . . . . . antitank
ATGM. . . . . antitank guided missile

BAMCIS . . . . . begin planning, arrange for reconnaissance, make reconnaissance, complete the plan, issue the order, and supervise
BD. . . . . base detonating
BP . . . . . battle position

C^2 . . . . . command and control
CAS. . . . . close air support
CLGP . . . . . cannon launched guided projectile
co. . . . . .company
COF. . . . . conduct of fire
CP . . . . . command post

CS . . . . . O-chlorobenzylidene malononitrile
CSAR . . . . . combat search and rescue
CVT . . . . . controlled variable time

D . . . . . delay
DOS . . . . . Department of State
DRAW-D . . . . . defend, reinforce, attack, withdraw, delay

E&E . . . . . evasion and escape
EA . . . . . engagement area
EFST . . . . . essential fire support tasks
EPW . . . . . enemy prisoner of war

FAC . . . . . forward air controller
FDC . . . . . fire direction center
FDO . . . . . fire direction officer
FFA . . . . . free-fire area
FFE . . . . . fire for effect
FH . . . . . frequency hopping
FH-M . . . . . frequency hopping master
FM . . . . . frequency modulation
FO . . . . . forward observer
FPF . . . . . final protective fire
FPL . . . . . final protective line
FPP . . . . . final preparation position
FSC . . . . . fire support coordinator
FSCC . . . . . fire support coordination center
FSCM . . . . . fire support coordinating measure
FSEM . . . . . fire support execution matrix
FSP . . . . . fire support plan
FUC . . . . . forward unit commander

GB . . . . . Sarin, a nerve agent (a G-agent)
GCE . . . . . ground combat element
GP . . . . . general purpose

HC . . . . . high capacity
HD . . . . . helicopter direction
HE . . . . . high explosive
HEAA . . . . . high explosive, antiarmor
HEAT . . . . . high explosive, antitank
HEDP . . . . . high explosive, dual purpose
HE-I . . . . . high explosive, incendiary
HEP . . . . . high explosive, plastic
HF . . . . . high frequency
HMG . . . . . heavy machine gun
HQ . . . . . headquarters
HR . . . . . helicopter request

ICM . . . . . improved conventional munition
ICS . . . . . internal communications system
ILLUM . . . . . illumination
inf . . . . . infantry
IPB . . . . . intelligence preparation of the battlespace/battlefield
IR . . . . . infrared radiation
ISMK . . . . . immediate smoke
ISUP . . . . . immediate suppression

kHz . . . . . kilohertz
km . . . . . kilometer
KOCOA . . . . . key terrain, observation and fields of fire, cover and concealment, obstacles, and avenues of approach

KOCOA-W . . . . . key terrain, observation and fields of fire, cover and concealment, obstacles and avenues of approach, weather/astrological data

ldr . . . . . leader
LOA . . . . . limit of advance
LP . . . . . listening post
LZ . . . . . landing zone

m . . . . . meter
MAGTF . . . . . Marine air-ground task force
MCRP . . . . . Marine Corps reference publication
mech . . . . . mechanized
METT-T . . . . . .mission, enemy, terrain and weather, troops and support available-time available
MG . . . . . machine gun
MHz . . . . . .megahertz
MIJI. . . . . meaconing, intrusion, jamming, interference
mm . . . . . millimeter
MOOTW. . . . . military operations other than war
MOPP . . . . . mission-oriented protective posture
MOUT. . . . . military operations on urbanized terrain
MRE . . . . . meal, ready-to-eat
MT . . . . . mechanical time
MTO . . . . . message to observer

NATO . . . . . North Atlantic Treaty Organization
NEO . . . . . noncombatant evacuation operation
NGF . . . . . naval gunfire

obj . . . . . objective

OP . . . . . observation post
OPS . . . . . operations
ORP . . . . . objective rally point
OT . . . . . observer to target

PAX . . . . . passengers
PD . . . . . point detonation
PHIB . . . . . amphibious
PIR . . . . . priority intelligence requirement
PLD . . . . . probable line of deployment
POD . . . . . point of departure
POL . . . . . petroleum, oils, and lubricants
POR . . . . . point of return
PSYOP . . . . . psychological operations
pyro . . . . . pyrotechnics
PZCO . . . . . pick-up zone control officer

Q . . . . . quick

RAAMS . . . . . remote antiarmor mine system
recon . . . . . reconnaissance
RF . . . . . radio frequency
ROE . . . . . rules of engagement
RP . . . . . release point
RPG . . . . . rocket propelled grenade

SAFE . . . . . security, automatic weapon, fields of fire, entrench
SALUTE . . . . . size, activity, location, unit, time, equipment
SAR . . . . . search and rescue
SC . . . . . single channel
SEAD . . . . . suppression of enemy air defenses

SFCP . . . . . shore fire control party
SMK . . . . . smoke
SOP . . . . . standing operating procedure
sqd . . . . . squad

tac . . . . . tactical
TACP . . . . . tactical air control party
TAD . . . . . tactical air direction
TAR . . . . . tactical air request
Ti . . . . . mechanical time
TOT . . . . . time on target
TOW . . . . . tube launched, optically tracked, wire command link, guided missile
TP . . . . . training practice
TRAP . . . . . tactical recovery of aircraft and personnel
TRP . . . . . target reference point
TTT . . . . . time to target

UHF . . . . . ultrahigh frequency
UTM . . . . . universal traverse mercator

VDC . . . . . volts direct current
VHF . . . . . very high frequency
VT . . . . . variable time
VX . . . . . O-ethyl methyl phosphonothiolate (a V-agent)

WC . . . . . white, concentrated
WP . . . . . white phosphorus
WSP . . . . . white star parachute

ZIPPO . . . . . zone inspection, planning, preparing and operation

Section II. Definitions

A

alternate position—The position given to a weapon, unit, or individual to be occupied when the primary position becomes untenable or unsuitable for carrying out its task. The alternate position is so located that the weapon can fulfill its original task. (FMFRP 0-14)

ambush—A surprise attack by fire from concealed positions on a moving or temporarily halted enemy. (FMFRP 0-14)

assault position—That position between the line of departure and the objective in an attack from which forces assault the objective. Ideally, it is the last covered and concealed position before reaching the objective (primarily used by dismounted infantry). (FMFRP 0-14)

automatic rifleman—A fire team member responsible for the effective employment of the automatic rifle and for the condition and care of his equipment. (FMFRP 0-14)

B

battle position—A defensive location oriented on the most likely enemy avenue of approach from which a unit may defend or attack.

Such units can be as large as reinforced battalions and as small as platoons. The unit assigned to the battle position is located within the general outline of the battle position, but other forces may operate outside the battle position to provide early detection of enemy forces and all-round security. (FMFRP 0-14)

bounding overwatch—A tactical movement technique used when contact with enemy ground forces is expected. The unit moves in bounds. One element is in position to overwatch the other element's move. The overwatching element is always positioned to support the moving unit by fire or by fire and maneuver. This is the slowest but most secure movement technique. (FMFRP 0-14)

breach—The employment of any means available to break through or secure a passage through an enemy defense, obstacle, minefield, or fortification. (FMFRP 0-14)

bypass—Maneuvering around an obstacle, position, or enemy force to maintain the momentum of advance. Previously unreported obstacles are reported to higher headquarters. Bypassed enemy forces are reported to higher headquarters. (FMFRP 0-14)

C

clear enemy in zone—A requirement to eliminate organized resistance in an assigned zone by destroying, capturing, or forcing the withdrawal of enemy forces that could interfere with the unit's ability to accomplish its mission. (FMFRP 0-14)

combat operations center—The primary operational agency required to control the tactical operations of a command that employs ground and aviation combat, combat support, and combat service support elements or portions thereof. The combat operations center continually monitors, records, and supervises operations in the name of the commander and includes the necessary personnel and communications to do the same. (FMFRP 0-14)

combined arms—The tactics, techniques, and procedures employed by a force to integrate firepower and mobility to produce a desired effect upon the enemy. (FMFRP 0-14)

coordinated fire line—A line beyond which conventional surface fire support means (mortars, field artillery, and naval gunfire ships) may fire at any time within the zone of the establishing headquarters without additional coordination. (FMFRP 0-14)

counterinsurgency—Those military, paramilitary, political, economic, psychological, and civic actions taken by a government to defeat insurgency. (Joint Pub 1-02)

D

delaying action—A type of retrograde operation in which space is traded for time, and maximum punishment is inflicted on the enemy without accepting decisive engagement, penetration, or being bypassed. (FMFRP 0-14)

delaying operation—An operation in which a force under pressure trades space for time by slowing down the enemy's momentum and inflicting maximum damage on the enemy without, in principle, becoming decisively engaged. (Joint Pub 1-02)

E

emergency action plan (EAP)—State Department generated and maintained set of documents to assist emergency actions at a particular post. The post's evacuation plan is a portion of this set of documents. Contains information on assembly areas, evacuation sites, key personnel, phone numbers, radio keys, evacuation routes, and number of United States citizens, etc.

evacuation control center (ECC) site—Planned site for the administrative processing of noncombatants, usually collocated with the assembly area for evacuees.

evacuation site—Planned site for the assembly and embarkation of noncombatants during a NEO.

F

final coordination line—A line used to coordinate the ceasing and shifting of supporting fires and the final deployment of the assault echelon in preparation for launching an assault against an enemy position. (FMFRP 0-14)

final protective line—A line selected where an enemy assault is to be checked by interlocking fire from all available weapons. A final protective line may be parallel with, or oblique to, the front of the position. (FMFRP 0-14)

fire and maneuver—The process of one or more elements establishing a base of fire to engage the enemy, while the other element(s) maneuver to an advantageous position from which to close with and destroy or capture the enemy. (FMFRP 0-14)

fire and movement—A technique primarily used in the assault wherein a unit or element advances by bounds or rushes, with subelements alternately moving and providing covering fire for other moving subelements. Fire and movement may be done by individuals (personnel or vehicles) or units (such as fire teams or squads). Usually, fire and movement are used only when under effective fire from the enemy because it is relatively slow and difficult to control. (FMFRP 0-14)

fire support—Assistance to elements of the Marine air-ground task force engaged with the enemy rendered by other firing units, including (but not limited to) artillery, mortars, naval surface fire support, and offensive air support. (FMFRP 0-14)

fire support coordinator—The officer in charge of the fire support coordination center. He is the direct representative of the landing force commander for the planning and coordination of all available fire support. (FMFRP 0-14)

forward air controller—An officer (aviator/pilot) member of the tactical air control party who, from a forward ground or airborne position, controls aircraft in close air support of ground troops. In the Marine Corps, a forward air controller is a naval aviator or naval flight officer, within the tactical air control party, who is specifically trained and qualified to exercise control, from the ground, of air support of ground forces. (FMFRP 0-14)

free-fire area—A specifically designated area into which any weapons system may be fired without any additional coordination. (FMFRP 0-14)

frontage—The width of the front plus that distance beyond the flanks covered by observation and fire by a unit in combat. (FMFRP 0-14)

frontal attack—An offensive maneuver in which the main action is directed against the front of the enemy forces and over the most direct approaches. (FMFRP 0-14)

H

hack—The command to begin timing or synchronize time. (FMFRP 0-14)

helicopterborne operation—A military action in which combat forces and their equipment maneuver about the battlefield by helicopters or vertical-landed aircraft. Aviation activities are under the

control of the aviation combat element commander who is assigned in direct or general support of one or more combat element(s). (FMFRP 0-14)

L

lane—A clear route through an obstacle. A lane for foot troops is a minimum of one meter in width and may be further expanded. A foot lane is marked with tracing tape along its center line. A single lane for vehicles is a minimum of eight meters in width; a double lane is at least 15 meters in width. Vehicle lanes are marked by any means available. (FMFRP 0-14)

linkup—An operation wherein two friendly ground forces join together in a hostile area. (FMFRP 0-14)

local security—Those security elements established in the proximity of a unit to prevent surprise by the enemy. (FMFRP 0-14)

M

mechanized operations—Tactical operations designed to maximize the ground mobility, protection, shock action, and firepower of combat vehicles to concentrate combat power rapidly against the enemy. Combat power is generated by the massed employment of tanks and by enhancing the mobility of the forces through the use of assault amphibious vehicles and other ground mobility means. (FMFRP 0-14)

mission-oriented protective posture—A flexible system for protection against a chemical attack devised to maximize the unit's ability to accomplish its mission in a toxic environment. This posture permits maximum protection from chemical agent attack without unacceptable reduction in efficiency. (FMFRP 0-14)

N

no-fire area—A designated area into which neither fires nor effects of fires will occur. Two exceptions occur: (a) the establishing headquarters asks for or approves fire or (b) an enemy force takes refuge in the area, poses a major threat, and there is insufficient time to clear the fires needed to defend the friendly force. (FMFRP 0-14)

O

obstacle—Any obstruction designed or employed to disrupt, fix, turn, or block the movement of an opposing force, and to impose additional losses in personnel, time, and equipment on the opposing force. Obstacles can exist naturally or can be manmade, or can be a combination of both. (Joint Pub 1-02) The effectiveness of an obstacle is enhanced considerably when covered by observation and fire. Obstacles can include abatis, antitank ditches, blown bridges, built-up areas, minefields, rivers, road craters, terrain, and wire. (FMFRP 0-14)

overhead fire—Fires delivered over the heads of friendly troops. (FMFRP 0-14)

overwatch—1. A tactical technique in which one element is positioned to support the movement of another element with immediate fire. 2. The tactical role of an element positioned to support the movement of another element with immediate fire. (FMFRP 0-14)

P

point of departure—A specific place where a unit will cross the line of departure. (FMFRP 0-14)

position—1. A location or area occupied by a military unit. 2. The location of a weapon, unit, or individual from which fire is delivered upon a target. (FMFRP 0-14)

a. **primary position—**A position which provides the best means to accomplish the assigned mission.

b. **alternate position—**A position to be occupied when the primary position becomes untenable or unsuitable for carrying out its task. The alternate position is located so that the individual can continue to fulfill his original task.

c. **supplementary position—**A position which provides the best means to accomplish a task that cannot be accomplished from the primary or alternate position. (FMFRP 0-14)

principal direction of fire—The direction of fire assigned or designated as the main direction in which a weapon will be oriented. It is selected based on the enemy, mission, terrain, and weapons' capability. (FMFRP 0-14)

priority of fire—Guidance to a fire support planner to organize and employ fire support means in accordance with the relative importance of the maneuver unit's missions. (FMFRP 0-14)

probable line of deployment—An easily recognized line selected on the ground where attacking units deploy in line formation prior to beginning a night attack. (FMFRP 0-14)

protective wire—Barbed wire entanglements located to prevent surprise assaults from points close to the defensive positions. They are close enough to be observed day and night and far enough from friendly positions to keep the enemy beyond normal hand grenade range. Protective wire is normally positioned from 50 to 75 meters from friendly positions. (FMFRP 0-14)

pursuit by fire—When the assault through the assigned objective is completed, the squad fires upon withdrawing enemy forces until they are no longer visible or are beyond effective range. (FMFRP 0-14)

R

rally point—An easily identifiable point on the ground at which units can reassemble and reorganize if they become dispersed. (FMFRP 0-14)

rear area security—The measures taken before, during, and/or after an enemy airborne attack, sabotage action, infiltration,

guerrilla action, and/or initiation of psychological or propaganda warfare to minimize the effects thereof. (FMFRP 0-14)

restrictive fire area—An area in which specific restrictions are imposed and into which fires that would exceed those restrictions will not be delivered without coordination with the establishing headquarters. The purpose of the restrictive fire area is to regulate fires into an area according to the stated restrictions. (FMFRP 0-14)

restrictive fire line—A line established between converging friendly forces that prohibits fires, or effects from fires, across the line without coordination with the affected force. The purpose of the restrictive fire line is to prevent interference between converging friendly forces. (FMFRP 0-14)

route reconnaissance—A directed effort to obtain detailed information of a specified route and all terrain from which the enemy could influence movement along that route. (FMFRP 0-14)

retirement—An operation in which a force out of contact moves away from the enemy (Joint Pub 1-02).

retrograde—A type of operation in which a unit conducts a directed, organized movement to the rear or away from the enemy. Forms of retrograde include delay, withdrawal, and retirement (MCRP 5-2A).

S

seize—To clear a designated area and obtain control of it. (FMFRP 0-14)

successive positions—Defensive fighting positions located one after another on the battlefield. A force can conduct a delaying action from successive delaying positions. (FMFRP 0-14)

supporting arms—Weapons systems of all types employed to provide fires to the commander. (FMFRP 0-14, proposed modification to Joint Pub 1-02)

T

tactical air control party—A subordinate operational component of a tactical air control system designed to provide air liaison to land forces and for the control of aircraft. (Joint Pub 1-02) In the Marine Corps, tactical air control parties are organic to infantry divisions, regiments, and battalions. Tactical air control parties establish and maintain facilities for liaison and communications between parent units and airspace control agencies, inform and advise the ground unit commander on the employment of supporting aircraft, and request and control air support. (FMFRP 0-14)

tactical recovery of aircraft and personnel—A mission performed by an assigned and briefed aircrew for the specific purpose

of the recovery of personnel, equipment, and/or aircraft when the tactical situation precludes search and rescue assets from responding and when survivors and their location have been confirmed. (FMFRP 0-14)

target precedence list—The commander's list of types of mobile potential targets arranged in the order in which they are to be attacked. It establishes target priorities for reactive targeting. (FMFRP 0-14)

time on station—The time that an aircraft can actually spend performing its assigned mission. It does not include the time transiting to and from the operating site. (FMFRP 0-14)

time to target—The number of minutes and seconds to elapse before ordnance impacts on target. (FMFRP 0-14)

traveling overwatch—A movement technique used when contact with enemy forces is possible. The lead element and trailing element are separated by a short distance which varies with the terrain. The trailing element moves at variable speeds and may pause for short periods to overwatch the lead element. It keys its movement to terrain and the lead element. The trailing element overwatches at such a distance that should the enemy engage the lead element, it will not prevent the trailing element from firing or moving to support the lead element. (FMFRP 0-14)

W

withdrawal operation—A planned operation in which a force in contact disengages from an enemy force (Joint Pub 1-02).

MCWP 3-33.5 formerly FMFM 8-2

Counterinsurgency Operations

U.S. Marine Corps

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SECTION 2

NATURE OF INSURGENCY

201. GENERAL

This section delineates those characteristics of subversive insurgency which distinguish it from other types of revolution. It describes the evolutionary nature of subversive insurgency as set forth in Communist doctrine and portrays the organizational structure which the Communist Party strives to establish in an insurgency movement. However, this is not to imply that all rebellions or attempts to overthrow established governments are inspired by communism.

202. DISTINCTIVE CHARACTERISTICS

A revolution in which a small group of men within a national government or its armed forces seize control is viewed as a coup d'etat. The use of open, organized, and armed resistance in which the inhabitants of an area seek to obtain independence but make no attempt to alter or overthrow the central government is a rebellion. The initial stage of a revolution which is still localized and limited to seeking modifications of government policy and does not yet pose a serious threat to the government in power is normally referred to as an insurrection. Any attempt by a dissident element to organize and incite the population of a country into forcibly overthrowing its existing government is called subversive insurgency.

203. REVOLUTION FROM THE TOP AND FROM THE BOTTOM

The illegal acquisition of governmental power may be considered to be of two types: revolution from the top and revolution from the bottom. In a revolution from the top (coup d'etat), a small group tries to obtain control of or neutralize the armed forces and other government agencies, usually with little or no violence and rarely seeking popular support

until after the coup has succeeded. The instigators of the coup, normally men in top echelons of government or the armed forces, seize the instruments of power such as mass-communication media, military materiel, transportation facilities, power stations, and finally, the symbols of power such as administrative and legislative buildings in the capital city. Revolution from the bottom (subversive insurgency) involves a more violent seizure of power and largely results from social dissatisfaction and government failure to meet the aspirations of the poeple. A mass movement, encouraged or directed by a hard insurgent core, develops slowly in a long evolutionary process until armed fighting occurs through a precipitant event. Since mobilization, organization, and manipulation of a sizeable segment of the population are prerequisites for successful revolution from the bottom, it is known as subversive insurgency. The Communists refer to such revolutions as "wars of national liberation."

204. INSURGENT STRATEGIES

a. General.--Although the insurgency strategy described in paragraph 203 is insurgency in the most complex and most commonly thought of form, it is only one of three widely recognized strategies or doctrines for insurgency. It is important to recognize that the insurgent is extremely flexible and each insurgency will have its own characteristics and objectives. Based upon the assets available, the conditions that exist and the philosophies of its leaders, insurgent strategies can vary from one which is based primarily upon a nonviolent overthrow of a regime to one which emphasizes violence as the basic tactic.

b. Left Strategy.--The essential elements of the left strategy are:

(1) That the conditions necessary for revolution can be created by violence.

(2) That the correct spark will create a spontaneous uprising against the government.

(3) That it can be achieved in a short term and requires the least amount of organization.

c. Right Strategy.--The right strategy is basically a political strategy which can be used when:

(1) The insurgent organization can achieve legal status either on its own or through a front.

(2) There is a chance to initially establish a coalition government.

(3) Violence can be used to discredit the government or members of it.

(4) There is a lot of time to achieve the insurgents' objectives.

d. Mass Strategy.--The mass strategy is the one which is the basis for the so-called "wars of national liberation" as described in paragraph 203. Because it is the strategy most often employed in some form or other, it is the one which the remainder of this section and subsequent sections of the manual will be using to exemplify the facets of and the measures necessary to counter an insurgency.

205. STAGES OF INSURGENCY

Mao Tse-tung's doctrine on protracted war in its militarization phase has been used by the Communist insurgent leaders in developing specific doctrine which provides that protracted military war has three stages. (Note: The term "stage" is used herein only to retain the accuracy of the translation of Mao's writings. The word stage is interchangeable with the term "phase" used hereafter.)

a. Passive Stage (Strategic Defense Stage)

(1) The passive stage is that initial period of the conflict during which insurgent elements must be on the defensive to ensure completion of the necessary political and military preparations for the succeeding stages. This stage is the most difficult and protracted of the three stages of the insurgent campaign. During the passive stage, specific conditions must exist and specific objectives should be achieved before the insurgency can enter the active stage. These conditions are as follows:

(a) The Communist Party must be strong in selected base areas.

(b) A popular cause or reason for the revolution must exist or have been created.

(c) Class warfare must be at an advanced stage. This will be linked with (b) above.

(d) A population base must have been created to provide manpower, materiel, and political support for insurgent forces.

(2) To achieve the above objectives, party doctrine stresses both constructive and destructive measures. These include:

(a) The expansion of the active party organization and the creation of a covert Communist-controlled revolutionary committee system at all organizational levels of the legal administration.

(b) The penetration of government offices, other political parties, trade unions, and movements for the purpose of obtaining intelligence, fostering popular support, or ensuring the elimination of political rivals.

(c) The creation of military forces for the purpose of organizing and controlling mass civil organizations; carrying out intimidation, terrorism, and sabotage; and engaging in minor military operations; e.g., "hit-and-run" ambushes and attacks on isolated posts.

(d) The promulgation of propaganda for both internal and external consumption to obtain material and psychological support for the revolutionary forces and to demoralize legal government supporters.

(e) The identification of the aspirations of the masses with Communist aims.

(3) A study of the above objectives and the measures necessary to achieve them will show that none are likely to be attained within a short

space of time; hence the prolonged duration of the passive stage. No Communist insurgency contemplates anything other than complete success, which means that all potential dangers to the party have to be eliminated; thus, time is no object.

b. Active Stage (Strategic Stalemate Stage)

(1) The active stage is initiated for the purpose of extending political control and increasing military action in armed resistance against government forces. The principal goal during the active stage is to further the Communist cause and reputation within the country and, thereby, expedite the buildup of military capabilities. This goal is achieved through the accomplishment of specific political and military tasks. Although in practice, Communist political and military activity are integrated, the objectives of each are cited separately for clarity. Political objectives in the active stage are:

(a) Extensive use of political control and influence over the masses and establishment of Communist government and administration in "liberated" areas.

(b) Further demoralization of the legal government and its organs and supporters, and the penetration and subversion of police, military, and paramilitary forces.

(c) Conversion or elimination of neutral or opposition groups.

(2) The measures employed in the early passive stage will be continued and amplified to include:

(a) The creation or reestablishment of bases.

(b) The employment of insurgent forces in activies such as farming, fishing, and lumbering in order to win population support.

(c) Intimidation through the use of systematic terror, selective sabotage, and guerrilla action.

(d) Demoralization through the negation of government successes, political or military; exaggeration of government failures; creation of doubt concerning the justice and efficiency of government countermeasures; and attacks on the character, good faith, and morals of government leaders at all levels.

(3) Military objectives during the active stage are:

(a) Tying down the maximum number of government troops in static defensive tasks and destroying lines of communication, supplies, and other government resources.

(b) Expanding existing base areas and "liberating" new territory.

(c) Forming cadres to recruit for Communist military forces by means of intimidation, persuasion, and terror.

(4) Military measures employed during the active stage include ambushes against military and police convoys and columns, attacks on pro-government population centers, and sabotage of all forms of communication. Increased Communist influence and military strength will enlarge the number of insurgent dominated population centers. Government reaction will be to attack these with consequent loss of men and equipment. Population centers controlled by government forces will require dispersal of host country military personnel and equipment in order to prevent capture by insurgents. Should host country forces succeed in defending villages, ambushes will be organized to cut off government supplies and reinforcements and prevent the withdrawal of troops. Insurgent doctrine requires the control of such villages after they have been vacated by government troops.

(5) "Preparation of the battlefield," or of those areas where insurgent regular forces are expected to be deployed against government troops in future conventional battles, is supervised by the central committee of the Communist Party at national level during the active stage. Preparation of such areas will include:

(a) The acquisition and storage of arms, ammunition, combat materiel, and food.

(b) Conduct of intelligence surveys of government force capabilities.

(c) Establishment of local population controls.

c. Counteroffensive Stage.--This is the final stage in the insurgency process and is initiated when the Communists believe they have gained sufficient military strength and population support to meet and defeat the government forces in decisive combat. It is difficult to define the end of the active stage and the beginning of the counteroffensive. The active stage ensures that the conditions for decisive battle in strategically selected areas all favor the insurgents, and the concentration of their forces must be handled in such a manner that the outcome cannot be in doubt once the battles begin. Terrain itself will continue to be of little strategic importance to the Communists and will be used primarily to gain a tactical advantage over government forces. On the other hand, terrain temporarily occupied must be of sufficient tactical or strategic importance to the government to compel the commitment of principal government forces. When the counteroffensive stage is ready to begin, the following conditions should have been met:

(1) The government will have reached a stage at which it can react only in the manner desired by the Communist insurgent forces.

(2) The concentration of government forces in the battle areas will be such that their destruction will ensure the collapse of the entire military control of the country.

(3) Government forces outside the battle areas will be absorbed completely in controlling the areas in which they are stationed.

(4) Civil administration will have collapsed or will collapse as soon as military control is removed.

(5) Insurgent forces will be strong enough to overwhelm their enemy in the battle areas and sufficient forces will be available to conduct subsidiary operations.

(6) The intelligence organization of the government will be ineffective and will receive only the information fed to it by the insurgents. The Communist intelligence organization will be so efficient that no move or decision will be made by the government without insurgent forces being quickly aware of it.

(7) The bulk of the population will be politically immobilized and completely obedient to the insurgent forces.

(8) Plans will be available to prevent government reserves from influencing the outcome of the battle.

206. INSURGENT ORGANIZATION

The insurgent organization falls into three principal elements: infrastructure, guerrilla organization, and military forces. These elements are named in their order of relative importance in achieving stated insurgent goals as defined by current revolutionary doctrine (i.e., Communist).

a. Insurgent Infrastructure.--The population's desire for change facilitates the effective organizing of an insurgent infrastructure. This infrastructure usually evolves from a small group that agitates for reform into a large, well-organized group. All revolutionary functions usually are performed by the infrastructure and include:

(1) Organization of the insurgent movement.

(2) Control and coordination of all insurgent activities.

(3) Internal administration of the insurgent movement, to include recruitment, training, financing, indoctrination, logistics, security, and communications.

(4) Subversion of the existing government's personnel and institutions.

(5) Psychological operations among the uncommitted people of the nation and among important foreign nations.

(6) Establishment of a "shadow" government which is to assume power if the insurgency is successful.

(7) Collection and dissemination of intelligence.

(8) Conducting sabotage of government authorities and institutions including assassinations of political leaders, disruption of economic institutions and processes, communications, transportation, armed forces, police, and militia.

(9) Organization of escape and evasion networks for members of the movement.

b. Functions During Militarization.--When guerrilla operations are conducted, the infrastructure functions in all of the above ways to conceal the identity of its members operating in areas in which the government has a continuing "presence" (i.e., military forces, militia, political officials, or police). In this situation, roving guerrilla units may conduct their own internal command, organization, and training functions; however, the infrastructure usually performs all other essential functions in support of the guerrilla units. Only in areas where the government's "presence" is sporadic can the revolutionary movement operate overtly, forming provisional governments and controlling the people. The concept of a covert infrastructure is inappropriate where the government is not present, because the people can openly provide food, clothing, shelter, and supplies to the insurgents.

c. Insurgent Political Organizations.--While insurgent political organizations are not rigidly structured, but rather are adapted to a particular situation, certain principles are adhered to. The organization is strictly compartmented, with individual members having access only to the minimum information and identity of other tasks. The activities of subordinate elements are controlled by the next senior element; subordinate elements do not conduct independent operations, nor do they communicate directly with other subordinate elements at their level unless specifically authorized. An example of a type insurgent political organization is shown in figure 1. Depending upon the size of the area to be controlled, districts may be further grouped into sectors, which in turn, are combined to form a zone. The political organization may well include some armed units which are separate and distinct from the guerrilla organization. These elements constitute the "police" arm of the political organization, and are used to enforce the decisions of their political jurisdiction.

d. Guerrilla Organization

(1) Three distinct paramilitary elements exist in the guerrilla organization--self-defense force, combat guerrilla unit, and secret guerrilla unit. The elements are employed as follows:

(a) The self-defense force is normally organized, trained, and employed for the defense of population centers and other insurgent facilities. It constitutes the local instrument to inflict damage on the enemy and to gain and maintain population control.

Sub-Cell	Cell	Sub-Group	Group	Sub-Dist	District
1 Sub-Cell	2 Sub-Cells Plus a Cell Leader	2 Cells Plus a Sub-Group Leader	2 Sub-Groups Plus a Group Leader	2 Groups Plus a Sub-District Leader	2 Sub-Districts Plus a District Leader
3 Men	7 Men	15 Men	31 Men	63 Men	127 Men

Figure 1.--Insurgent Political Organization.

(b) The combat guerrilla unit is employed by the party in support of regular military forces or is used independently to conduct small operations.

(c) The secret guerrilla unit is used primarily to enforce the will of the party in a given area, and it is composed to a large degree of party members.

(2) Although young men are sometimes coerced into service, the individual enrolled in a local guerrilla unit is normally a volunteer. In most areas, the identity of the members of the guerrilla units is known to most of the inhabitants, but fear of brutal reprisal deters disclosure. Consequently, the guerrilla is not readily identifiable to government forces. He operates in or close to his home, sometimes in conjunction with insurgent military forces. By day, he works at his normal job; at night, or during emergencies, he is available for assignment by his party superiors. The insurgent leadership prefers at least five to 10 guerrillas in each village or urban canton/barrio type area. In those villages under insurgent control, a full squad of 10 to 17 personnel or a platoon of from three to four such squads is normal. A type insurgent guerrilla platoon is shown in figure 2.

e. Military Forces

(1) Of the three principal organizational elements of the Communist insurgent organization, the military forces are considered to be the lowest in organizational importance. Communist planning provides for military reverses and the possible necessity for retrenchment, restructuring, or even temporary disbanding of its military forces should enemy strength prove overwhelming. Party strategy is based realistically upon the assumption that as long as the infrastructure and the guerrilla organization remain intact, the military arm of the insurgent movement can be reactivated or replenished; however, without the party nucleus and popular support, the movement cannot succeed.

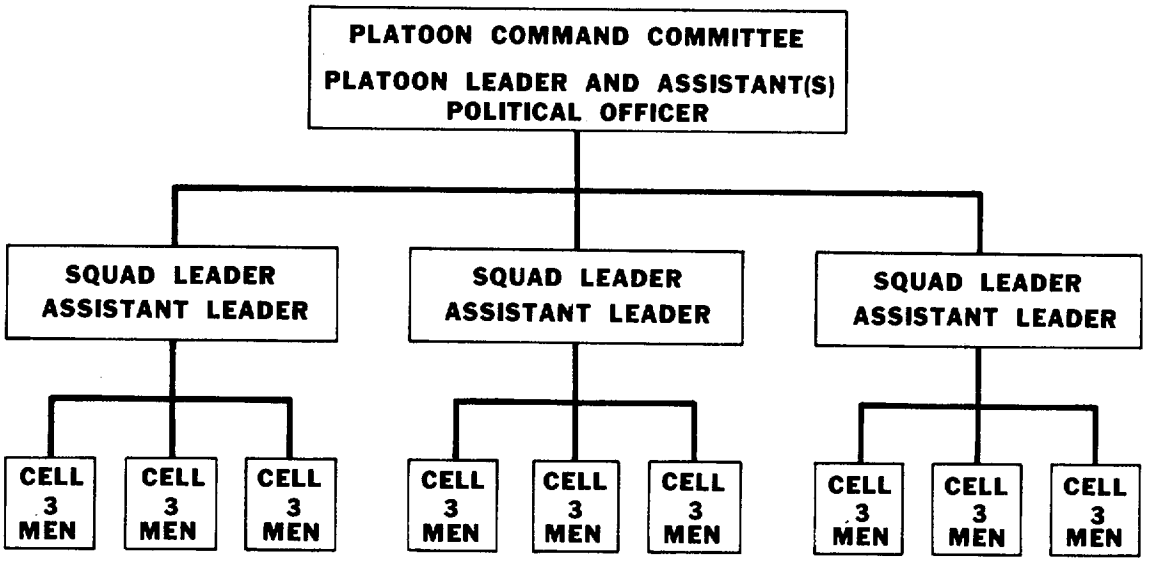

Figure 2.--Type Insurgent Guerrilla Platoon.

(2) Communist insurgent military forces fall into two classes --main forces and regional forces. These two elements are distinguished from the guerrilla units which, although paramilitary, do not fall within the military chain of command. These forces are generally as follows:

(a) Main Force.--This force is normally a body of well-trained soldiers, many of whom may have been infiltrated into the country. It is a highly motivated, elite fighting group, many of its personnel being full or candidate members of the Communist Party. Although deployable where needed, the main force usually is controlled at the interprovincial level.

(b) Regional Force.--The regional force is made up predominantly of indigenous personnel recruited directly from the local areas or promoted from the ranks of the guerrilla units. Units of this type operate in specific areas of no more than provincial size.

f. Political-Guerrilla-Military Coordination

(1) A clandestine power structure of significant size and complexity requires both time and specific techniques for its creation and subsequent employment. In combining the activities of the political and armed elements, certain principles are adhered to.

(a) All armed operations are undertaken in support of a political goal.

(b) Armed and political elements are integrated into the same geographic structure, but will remain highly compartmented, with unity only at the higher regional and zonal levels.

(c) All armed units will include a political as well as a military leader. In certain instances, the political leader may overrule the military leader.

207. LEGAL STATUS OF INSURGENTS AND INSURGENCIES

a. Law of Land Warfare.--The law of land warfare is a body of treaties and unwritten laws firmly established by the custom of nations and well-defined by recognized authorities in international law. This law of land warfare states that members of organized resistance movements opposing military forces are entitled to be treated as prisoners of war if they meet the following requirements:

(1) They are commanded by a person responsible for his subordinates.

(2) They wear a fixed, distinctive sign recognizable at a distance.

(3) They bear arms openly.

(4) They conduct operations in accordance with the laws and customs of war.

b. Geneva Conventions of 1949

(1) Article 3.--If both sides in a civil war or revolt request and receive military support from foreign powers, the opposing foreign

PART II. COUNTERINSURGENCY TACTICS AND TECHNIQUES

SECTION 6

MILITARY TASKS

601. GENERAL

Counterinsurgency situations may occur during any stage of national development and will normally involve concurrent and coordinated military and diplomatic actions. Accordingly, the political authorities participate in planning and exercise considerable influence on military operations. Marine Corps forces may anticipate a requirement to participate in political, social, and economic developmental activities as well as conducting tactical military operations.

602. MILITARY FUNCTIONS

a. Primary Function.--The primary function of Marine forces within a host country is to restore law and order and reestablish security in coordination with the host country.

b. Secondary Function.--An ancillary function of Marine forces is to promote, in coordination with the civil agencies of the host country and the foreign service departments of our own government, the political, social, and economic welfare of the host country.

603. STATUS OF MARINE CORPS FORCES

Marine Corps forces may be called upon to conduct operations unilaterally or as part of a larger force in countries with which the United States may or may not have diplomatic relations. If the United States has a diplomatic mission, it should negotiate a status of forces agreement. If

there is no diplomatic representation, the commander should advise his next senior commander and request that action be initiated to negotiate such an agreement.

a. Status of Forces Agreement.--An agreement between two or more nations defining the legal position of a military force deployed in the territory of a friendly state is a status of forces agreement. It establishes the military rules and regulations governing visiting forces and describes how the local laws and the authority of local officials will be applied to members of the force. Some of the particulars which may be included in a status of forces agreement are:

(1) Channels of official liaison.

(2) Relationships with third party governments.

(3) Emergency military authority.

(4) Provisions for freedom of movement, wearing of arms, jurisdiction of courts, taxes, licensing, customs payment, postal services, and similar regulations.

(5) Settlement of claims.

(6) Currency arrangements.

(7) Health and sanitation matters.

(8) Civilian services and supplies.

b. Relationships With Other U.S. Agencies.--(See par. 403.)

604. MILITARY OPERATIONS

a. General.--The combat power of the Marine air-ground task force (MAGTF), its expeditionary nature, training, and organization are sufficiently flexible for effective conduct of military operations in a counterinsurgency environment.

b. Mission.--The mission assigned to the MAGTF within a host country will be to assist the host country in attaining its internal defense and internal development objectives. This mission will normally reflect the following functions:

(1) The primary function of the MAGTF in a host country is to establish or restore security in conjunction with the host country.

(2) An ancillary function of the MAGTF in a host country is to promote (in conjunction with the civil agencies of the host government, U.S. Government agencies, and private U.S. agencies within the host country) the political, social, and economic welfare of the host country.

605. OBJECTIVES

In performing the foregoing functions to accomplish the assigned mission, it is necessary to establish priorities as follows:

a. Ensure the security of the population and resources in order to deny these assets to the insurgents.

b. Defeat the guerrilla forces and destroy the insurgent infrastructure.

c. Defeat the organized military forces of the enemy.

d. Conduct civil affairs operations which include civic action and psychological operations.

606. OPERATIONAL CONSIDERATIONS

a. Need for Constant Pressure.--Guerrilla forces react to pressure by moving to another area, mingling with the populace, or remaining inactive. Commanders must be extremely cautious not to consider the guerrilla force eliminated because it is no longer active. When contact with the guerrilla is lost, aggressive efforts, which include maximum use of covert agents, aerial surveillance, ground patrols, and helicopterborne combat patrols, are employed in order to retain contact and maintain pressure. Periods of reduced pressure allow the guerrilla time to rest, reorganize, and resume operations at a time of his choosing.

b. Secrecy and Surprise.--The excellent intelligence system of the insurgent makes it extremely difficult to deny him information concerning future operations. The following are some of the measures which will improve security and improve the chances of achieving surprise:

(1) Constant indoctrination of the individual Marine on the importance of security.

(2) Effective and secure communications.

(3) Employing imaginative tactics and techniques to avoid establishing patterns in operations.

c. Mobility.--Superior mobility is a significant advantage; it is a responsibility of commanders to ensure that it is employed to the maximum. All means are used--fixed-wing air, helicopters, tracked and wheeled vehicles, boats, railroads, and pack animals.

d. Intelligence.--The key to success in counterinsurgency operations is information. Planning must provide for collection and rapid communication of all intelligence information. It is the commander's responsibility to ensure that this highly perishable information is acted on quickly.

e. Popular Support.--A basic problem is one of protecting the civilian population and at the same time ferreting out guerrillas who hide among them and operate from that base of support. Although the guerrilla may be supported by a segment of the population that is loyal and sympathetic to his ideological cause, it must be remembered that he also sustains support by intimidation and enforced taxation. Support is rendered when the populace lacks confidence in the government's ability to protect them. Confidence can be restored by a strong government, and fears overcome through the protection by local security forces. Guerrilla support can be sharply curtailed by effective population control measures, achievement of area security, and development of a sound intelligence program.

607. POLITICAL CONSIDERATIONS

The senior Marine commander should seek political guidance from the U.S. Department of State representative or other appropriate authority. He should then promulgate appropriate instructions to subordinate commanders in order that each individual of the command understands the political objectives of the United States and those of the host country.

a. Actions and Activities.--The actions of Marine Corps forces reflect the policies and attitudes of the U.S. Government--what we do is more important than what we say.

b. Respect, Confidence, and Loyalty.--It is important to indoctrinate individual Marines on the need to promote the respect, confidence, and loyalty of the population toward the host government.

c. Restoration of Political Machinery.--Marine forces may be required to assist in the reestablishment of the machinery of government where it has been destroyed.

d. Assess the Political Effect.--Political considerations are often more important than military ones in a counterinsurgent environment. Commanders must continually assess the possible effects of operations and ensure their compatibility with political objectives.

608. ECONOMIC CONSIDERATIONS

Operations must be conducted so as not to upset the economy of the host country, but only to a point where the accomplishment of the mission is not endangered.

a. Economic Impact of Military Forces.--A significant part of the overall mission is to assist in maintaining the economy of the host country. It may be necessary to impose economic and financial controls to ensure that the impact of Marine forces is not disruptive.

b. Local Resources.--Local resources, both human and material, should be employed to the maximum, but the sponsoring of new enterprises designed solely to support Marine Corps needs should be avoided.

c. Control of Materials.--Planning should cover controls over the flow of materials in order to prevent support of insurgents and entry of the material into black market channels.

d. Rationing.--It may become necessary for the host government to establish controls over exports, imports, currency, wages, and prices. Marine Corps forces should be aware of the implementation of such controls and take such measures as necessary to ensure compliance with them.

e. Employment of Indigneous Labor.--Maximum employment of indigenous labor should be promoted under host government labor policies; however, care should be taken in the employment of these people. Security is of paramount importance in the selection of indigenous laborers.

f. Protect Low-Income Groups From Exploitation.--Exploitation of low-income groups by creditors is frequently a source of discontent which can be used by dissidents. It may often be necessary to provide physical

security for cooperatives, support of credit systems, or programming the purchase of commodities in order to combat this capability. There are additional areas where this same principle applies and where corrective action may be necessary. The following are examples:

(1) Elimination of tax abuses.

(2) Furtherance of honest government by elimination of corruption, graft, and bribery.

g. Technical Assistance and Supplies.--Marine Corps forces should apply such skills and resources as are within their capability and without degrading their assigned military tasks toward:

(1) Improving agricultural output.

(2) Rehabilitation of markets.

(3) Reestablishment of lines of communication.

h. Denial of Skills and Resources to the Enemy.--Measures should be taken to acquire skills and resources for use by the host government and to deny their use to the insurgents. These measures should be coordinated with the host country's populace and resource control program.

i. Public Works.--Public works should be undertaken only on request of local leaders and designed where possible for short term completion with readily visible results.

j. Guidance and Assistance.--Economic guidance and assistance may be obtained from the local representative of USAID or other U.S. representation.

609. SOCIAL WELFARE ACTIVITIES

Guidance is provided by the senior USAID official or the representative of the Ambassador. If these officials are not available, assistance may be requested from the responsible military commander. Social welfare activities include the following:

a. Reconstruction and improvement of educational facilities.

b. Provision of medical care and medical civic action program.

(1) Be compatible with the host government's health program.

(2) Not exceed the capacity of the host government to continue:

(a) Training local health workers.

(b) Maintaining control over medicines.

c. Assistance in public health programs through instruction and community work projects.

d. Control, evacuation, feeding, clothing, and sheltering of refugees.

e. Support of orphanages, child care centers, and children's hospitals.

610. PSYCHOLOGICAL OPERATIONS (PSYOP)

Two major groups provide the target for Marine Corps psychological operations--the insurgents and the civilian population. Guidance in the formulation and conduct of the program can be obtained from the senior U.S. Information Agency representative.

a. Directed at the Insurgent.--Operations will be designed to lower morale and to encourage surrender. Emphasis should be placed on known enemy weaknesses and should be designed to take advantage of social or religious vulnerabilities.

b. Directed at the Population.--Operations should be designed to discredit the insurgent, to explain the U.S. presence, to gain popular support for the host government, and to reduce civilian casualties from military operations.

611. TACTICAL OPERATIONS

There are two primary types of counterguerrilla tactical operations --strike operations (see par. 612) and consolidation operations (see par. 613). The primary objective of these operations is to establish a secure environment within which internal development is possible by finding, fixing, and destroying insurgent forces.

a. Concepts.--Tactical operations are not independent sporadic actions; they are a part of a large campaign employing other internal defense and development forces intended to achieve a broad objective.

(1) Phase I Insurgency.--Insurgent activities range from threats of violence to subversive incidents occurring in an organized pattern. These are countered with control by civil security and counter-intelligence forces while armed and paramilitary forces are trained or deployed in show-of-force operations.

(2) Phases II and III Insurgency.--Guerrilla warfare is initiated (phase II); in phase III, mobile warfare is conducted. Subversion, guerrilla warfare, and mobile warfare may be conducted simultaneously. U.S. and host country forces must be prepared to counter all forms of insurgent activity in phases II and III.

b. Organization of Forces.--Emphasis is placed on firepower and mobility. Organization should stress tactical self-sufficiency. Adequate intelligence, communications, and transportation are essential. The necessity for dealing with the civilian population requires the inclusion of civil affairs and PSYOP personnel in the staff organization.

(1) Size and Composition.--The force committed initially must be large enough to defeat the insurgents speedily; insufficient force at the start can result in lengthy, inconclusive, and costly operations. The situation and terrain determine organization, but consideration is given to the fact that guerrillas operate in difficult terrain without air, heavy weapons, or armor.

(2) Organization.--Within the battalion task force and/or its component companies, elements are organized into the following:

(a) Patrols.--Patrols are extensively used and vary in size from a fire team to a reinforced company, and they may be employed for extended periods. Organization may include appropriate civilian augmentation to include local guides, trackers, and members of the civilian police. See section 8 for a discussion of patrolling.

(b) Reaction Force.--A mobile reaction force is located at each combat base and is organized and equipped to engage rapidly reported guerrilla forces or to reinforce friendly forces. This reaction team ranges in size from a reinforced platoon to a reinforced company and is capable of rapid movement by surface vehicle or helicopter.

c. Tactical Operations.--Saturation patrolling to locate and fix insurgent forces followed by offensive operations to destroy them is the essence of tactical operations. Saturation patrolling requires the deployment of squad and platoon size patrols over a selected area of operations so that insurgents cannot move without being detected. The following refinements to the basic tactics are employed:

(1) Patrol by foot, tracked vehicle, wheeled vehicle, aircraft, and boat. Establish checkpoints on routes of communication; search villages, hamlets, and individual homes.

(2) Organize ambushes in depth which are supported by adequate reserves.

(3) Conduct raids against hamlets known or suspected of harboring insurgent personnel or supplies.

(4) Man outposts with minimum forces; rely on fire support and mobile reserves to relieve beleaguered posts.

(5) Make maximum use of civilian police to maintain security.

(6) Make maximum use of fire support for defense and support of operations.

(7) Immediately attack located guerrilla forces.

d. Mobile Warfare.--The tactics outlined above must be modified significantly to meet the threat of mobile warfare which is not positional or guerrilla warfare. The overall objectives are the same, but larger reserves are maintained. Operational forces are larger, artillery fires are massed, and larger security forces are required. The initiative is the objective, not terrain; and tactics such as envelopment and penetration will not be fully effective. Insurgents rely on caches, safe areas, and population support which is widely dispersed; they are not dependent on critical logistic bases which they must protect.

e. Principles of Operation.--Continuous pressure must be maintained, and commanders must not assume the enemy to be destroyed when he ceases to resist. When contact is lost, aggressive effort must be initiated to resume it. Long periods of inactivity favor the enemy.

(1) Concentrate on destruction or neutralization of the enemy force, not on terrain.

(2) Front and rear lines do not exist--external vigilance is a must.

(3) Tactical areas of responsibility should not be defined by straight linear boundaries. Complete political subdivisions should be included in order to facilitate coordination with civil agencies.

(4) Defensive tasks should be allocated to paramilitary and irregular forces.

(5) Defensive measures permit the enemy to gather strength. Only continuous pressure will prevent his gathering supplies, resting, recruiting, and massing for offensive operations.

(6) Informant nets should be established within the population.

(7) Plan fire support for outposts; maintain adequate reserves and a reinforcement capability.

(8) Large forces should not be committed until the enemy has been found and fixed.

(9) Large forces should not be garrisoned in the hope that their presence will deter guerrilla operations.

f. Offensive Operations.--The purpose of offensive operations is to destroy insurgent forces and their base areas.

(1) Once located, enemy forces are attacked as soon as possible. Friendly forces should be larger, and encirclement is the preferred tactic.

(2) Harassment prevents the enemy from resting, reorganizing, and massing personnel and supplies for large-scale attacks. Harassment may also be used as an economy-of-force measure in low priority areas.

g. Defensive Operations.--Normally, defensive operations are conducted as coordinated military and civilian programs. The purpose is to:

(1) Reduce guerrilla capacity for offensive action.

(2) Deny entry to an area.

(3) Destroy or capture the guerrilla force.

(4) Develop more favorable conditions for offensive action.

(5) Apply economy of force in one area in order to apply decisive force in another.

h. Retrograde Movements.--Except during phase III, guerrilla forces will seldom force a retreat; however, for economy of force or other reasons, retrograde movements may be required.

i. Combat Bases.--Combat bases are secure locations from which operations are projected and supported. They may be permanent or semipermanent,

and they contain essential command and control communications plus combat support and combat service support elements. See section 9 for fire support base details.

(1) Location.--Combat bases are established within or immediately adjacent to their area of responsibility. If the battalion tactical area of responsibility (TAOR) is large, companies may establish combat bases within their sectors. The base is moved as often as is necessary for security and to remain within striking range of the guerrillas. Patrols operating from battalion or company bases may establish temporary patrol bases from which to extend their operations. Extensive use of ground vehicles and helicopters can reduce the need for bases.

(2) Size.--Combat bases may be required to accommodate elements conducting nontactical missions in the area. Bases will vary in size with the size of the unit or units occupying it and in accordance with security requirements. An additional factor which must be considered is communication requirements.

(3) Security.--Defense is a major consideration and combat bases will normally be selected with an eye toward security. The most easily defended terrain is selected and natural obstacles are desirable. Outposts and listening posts are established as required.

612. STRIKE OPERATIONS

Sometimes known as "search and clear" or "search and destroy," the purpose of strike operations is to inflict damage on, seize, or destroy an objective, either terrain or hostile forces. Other operations such as consolidation, intelligence, psychological, populace and resource control, civic action, and advisory assistance are minimized during the period of a strike operation. Strike operations are of relatively short duration (1 day to several weeks). Other activities are pursued only to the extent they assist the strike operation in progress.

a. Concept.--Generally, strike operations are conducted against located guerrilla forces in areas outside of those undergoing consolidation operations or those under friendly control. The purpose is to destroy or harass and not to capture terrain or remain permanently in the area. Ground or water means of entry may be used, but the most favored means is by helicopter. A combination of means is usually required. Strike operations include raids, reconnaissance in force, or a combination of these tactics.

b. Operations.--A thorough search of suspected areas is necessary in order to defeat the guerrilla's capability to hide weapons and blend with the population. Plans must allow sufficient time for a thorough search. When small reconnaissance forces uncover large guerrilla forces, reaction forces must be available to exploit the contact. Deliberate attack after thorough reconnaissance, methodical evaluation of relative combat power, and development of target analysis are not possible in counterguerrilla operations. If intelligence is reasonably reliable or the guerrilla force has been fixed, an attack is feasible. If an area is only suspected of harboring insurgents, a reconnaissance in force, followed by a raid or coordinated attack is the accepted procedure.

c. Raid.--Raids are usually small scale and require swift penetration of hostile territory. They are employed to gain information, harass

the enemy, or destroy him. A planned withdrawal upon completion of the mission is normal. Surprise and accurate intelligence are basic requirements. See FMFM 8-1, Special Operations, for additional information.

(1) The size of the force may vary from a squad to a reinforced battalion, depending on the mission.

(2) Transport helicopters with armed helicopter escort offer the preferred means of mobility. Night raids are feasible but require readily identifiable terrain features for quick troop orientation and accurate delivery.

d. Reconnaissance in Force.--A limited objective operation, characterized by a thorough search of an area and conducted by a considerable force to discover the hostile guerrilla force dispositions and to develop other intelligence, is called a reconnaissance in force. It is followed immediately by a coordinated attack on located forces and installations. In areas where guerrillas are known to be operating at less than platoon strength, platoons may conduct reconnaissance in force operations supported by artillery. If larger guerrilla forces are encountered, small units should attempt to fix them and maintain contact.

e. Movement to Contact.--Movement to contact is basically the same as in conventional war. Emphasis is on night movement, clandestine movement, and counterambush precautions. Lead elements move by bounds. When lead elements gain contact, the guerrilla will most probably withdraw. Every effort must be made to maintain contact and pressure. Helicopters provide the best means of movement. Their employment enhances surprise and lessens the likelihood of an ambush.

f. Pursuit.--Pursuit may consist of direct pressure forces in frontal attack or a combination direct pressure/encircling force as in an envelopment. The purpose is to destroy the adversary who is in the process of disengaging. Terrain objectives may be assigned to facilitate control, but the primary objective remains the guerrilla force.

g. Encirclement.--A battalion is normally the smallest unit capable of conducting an encirclement; companies do not possess sufficient personnel, communications, and command and control capability except against small concentrated guerrilla forces.

(1) Troop Requirement.--Troop density dictates the destruction tactics to be used. Encirclement requires a high preponderance of friendly troops; however, fire power, aerial surveillance, and use of helicopter-borne reserves can reduce the requirement.

(2) Timing.--The goal is a complete surprise encirclement. One method is to move to the area of encirclement during darkness, thereby leaving daylight for completion of destruction operations.

(3) Occupation of Line of Encirclement.--Speed is emphasized in the early phases, and helicopters provide maximum speed. The critical period is the occupation of the line, since the guerrilla force will react immediately once they discover their predicament. They will probe for gaps, or attack weak points to force a gap, or attempt exfiltration individually or in small groups. The best tactic is occupation of the line simultaneously. The next best tactic is to cover all likely escape routes

first. On arrival, troops immediately occupy defensive positions and send out patrols to their front to gain early warning of breakout attempts.

(4) Aircraft Employment.--Attack aircraft are employed in a close support role. Observation aircraft and helicopters are used for reconnaissance and surveillance and as command vehicles. Transport helicopters are used to shift forces as needed. Armed helicopters may be used to close the encirclement in areas not otherwise dominated by supporting arms, and to prevent the enemy from escaping.

(5) Elimination of the Guerrilla Force.--(See par. 813.)

613. CONSOLIDATION OPERATIONS

Consolidation operations, sometimes identified as "clear and hold operations," are the application of all aspects of national internal defense and development programs to specific regions or other political subdivisions in order to maintain or restore internal security of those areas.

a. Methods of Operation.--Marine Corps forces committed to consolidation operations support the internal defense and development effort by employing their resources in the following methods:

(1) In the offensive phase, strike operations are stressed.

(2) In the defensive phase, extensive patrolling and defense of the area are primary missions. Marine forces provide advisory services in training paramilitary forces. Civic action programs will be initiated. The overall aim is to permit host country agencies to take over the defense in order to permit Marine forces to resume offensive counterguerrilla operations in other areas.

b. Concept.--Regular armed forces, paramilitary, economic, social, psychological, and civic elements are integrated under the direction of government officials. Activities are designed to prevent resurgence of the insurgent movement; the ministry of defense and the armed forces accept supporting roles. They may be required to provide communication and transportation assistance when commercial facilities are ineffective. Operations of U.S. forces normally parallel rear-area security activities in conventional warfare. Some of the features are:

(1) Combined, joint, and interdepartmental civil and military operations at the lowest levels.

(2) Subordination of military to civilian activities.

(3) Dispersion of small units over extremely wide areas.

(4) Mission diversity between the military and civilian operations.

(5) The establishment at all levels of a coordinative body whose membership shall be composed of representatives of all agencies (military, paramilitary, police, intelligence, political, and civil administrative) which operate in a given area of the host country. The function of this body is to coordinate the allocation of material and personnel resources, methods of policy implementation, and evaluation of intelligence in the

area within which it is organized. (See FM 100-20, Internal Defense and Development - U.S. Army Doctrine.)

c. Organization.--Political subdivisions plan and execute their own consolidation operations. Marine Corps units organize small independent task forces to correspond with them. Care must be exercised to ensure that Marine forces are not assigned greater areas than they can control or given missions which they cannot accomplish.

d. Operations.--Clearing guerrilla forces from the area is the first task in order to establish a controlled area; the controlled areas can subsequently be expanded and linked. Once the area has been cleared, regular armed forces and paramilitary forces establish defenses to prevent infiltration. Defense measures include resource control and screening of civilians. Concurrently, government authority is reestablished and civil activities are restored to operational status.

e. Phase of Operations.--Consolidation operations consist of a planning phase followed by the operational phases of offense and defense.

f. Planning Phase.--In the planning phase, military and civilian resource requirements are determined and the activities of all agencies both military and civilian are coordinated. The required resources, personnel, and material must be available for commitment prior to the initiation of the offensive phase.

g. Offensive Phase.--This phase includes the movement of the civil-military task force into the area; destroying or clearing guerrilla forces; replacement of insurgent political, economic, social, civic, and psychological functionaries; and identifying and destroying underground elements and sympathizers. Strike operations establish counterguerrilla bases from which operations are coordinated in order to destroy guerrilla bases and eliminate guerrilla units. Offensive patrolling, area surveillance, ambushes, and other small unit operations will culminate in the establishment of friendly controlled areas. Patrolling operations cover the entire area with the task of locating guerrillas and blocking approaches. Some patrols will be of long range and long duration. These will require air support. Strike operations will be conducted in order to:

(1) Find the guerrilla and the routes he uses.

(2) Block escape routes with ambushes and reaction forces.

(3) Contain guerrilla forces with small fixing forces.

(4) Destroy guerrillas and their bases with fire and maneuver.

(5) Commit reserve forces as required.

h. Defensive Phase

(1) The goal is the holding of an area against guerrilla attack in order to permit civilian agencies to conduct development programs. Programs include training local irregular and paramilitary to assume defensive and security missions. Offensive action is required for the elimination of guerrilla forces. Defensive operations accomplish the following:

(a) Deter guerrilla offensive action.

(b) Reduce guerrilla capacity for offensive actions.

(c) Deny guerrillas entry into an area.

(d) Deny guerrillas internal and external support.

(e) Destroy or trap guerrilla forces.

(f) Develop favorable conditions for other counterguerrilla operations.

(g) Economize forces in one area in order to apply decisive force in another.

(2) The normal form of defense in consolidation operations is a variation of the area and mobile defense described in FMFM 6-1, Marine Division, and FMFM 6-2, Marine Infantry Regiment. Emphasis is placed on the use of obstacles and fire planning.

(3) The bulk of the defensive force is assigned to the security echelon in order to conduct extensive patrolling.

(4) Large areas require extended distances between elements of the defense echelon. It may be desirable to assign the reserve echelon the mission of reaction force for several installations in the area.

(5) Fragmentation of fire support units might be required to a greater degree than in conventional warfare. Registration of indirect fire on likely assembly areas and avenues of approach will aid in the defense.

(6) Maximum use is made of host country agencies in securing and defending.

(7) Security measures must be emphasized. These include training all personnel in defensive tactics, use of guard and patrol dogs, screening and checking of local laborers, and active measures to prevent sabotage.

(8) Area and strong point defenses include the use of combat bases and static defense posts.

(a) Installation and population center defense is based on mutual fire support; a basic requirement is support from artillery and mortars within range of several installations. Adequate communications are essential to mutual defense.

(b) Once the area is cleared, defense of communities is the responsibility of the paramilitary, police, or irregular forces. Defensive measures stress population and resource control, with emphasis on the following:

1 Boundaries, coordination points, and the configuration of the operations area are dependent primarily on the political boundaries of the community rather than terrain considerations.

2 Surveillance and security measures encompass day and night operations.

3 Defensive positions require auxiliary exits and covered entrances. Shelters should have walls reinforced for protection against small arms. Consideration should be given to connecting trenches and the storing of supplies in dispersed and protected caches.

4 Fire planning should emphasize coordinated close defensive and final protective fires to repel attacks since guerrillas usually attack from close-in assembly areas.

5 Intensive intelligence coverage inside and around communities.

6 Extensive patrolling outside the defensive perimeter.

7 Mobile reaction forces to counter guerrilla attacks.

8 Communications which make coordination possible.

(c) Security of food, arms, and ammunition must receive special attention. These items are highly valued by guerrillas.

(d) Maximum use is made of camouflage and dummy positions, natural and manmade obstacles, alarms, illumination, electronic surveillance devices, and restricted areas. Fields of fire are cleared and field fortifications constructed. Patrolling is intensive, and routines are changed frequently to avoid patterns.

(e) Installations and communities are organized for all-round defense, and artillery support may be provided from units located in the area. Guards and patrols are used to prevent surprise. Concealed approaches are mined and covered by automatic weapons and flame field expedients. Areas which are suitable for placing short-range fire by guerrillas are mined and cleared.

(f) Personnel, other than defense forces, are not allowed within defensive positions. Friendly civilians and domestic animals may be helpful in warning of the approach of guerrilla forces.

(g) Illuminating grenades, air and ground flares, artillery and mortar illuminating shells, searchlights, and illuminating devices provide means for countering guerrilla night attacks.

(h) Surveillance patrols and a system of static security posts may be used to secure lines of communication. Static security posts protect critical points such as terminals, tunnels, bridges, roads, and railroad junctions.

614. IDENTIFICATION AND DESTRUCTION OF ENEMY FORCES

a. Guerrilla offensive tactics are basically the raid and the ambush, and success depends on good intelligence, detailed planning, surprise, speed of execution, and determination. The guerrilla strikes and disperses in order to avoid the reaction. After disengaging, he attempts to blend into the populace until ready for future commitment. In order

to counter these tactics effectively, it is basic that the guerrilla force is the target, not the terrain. The guerrilla force must be destroyed or captured through coordinated activities of strike and consolidation operations.

b. Locating the guerrillas in order to fix and destroy them is extremely difficult. The guerrilla is operating in familiar terrain among ethnically similar people, which further complicates the problem. In order to locate, identify, and destroy enemy units, Marine Corps elements will require effective liaison with all host country and U.S. elements in the area.

615. IDENTIFICATION AND DESTRUCTION OF ENEMY INFRASTRUCTURE

Effective government control cannot be restored until the causes of the insurgency are removed and insurgent organizations purged. These goals are uppermost in national strategy. A small, hard core leadership faction exists at the heart of every insurgent movement. Elimination of this hard core will cause the disintegration of the entire insurgent organization.

a. Identification.--Intelligence must be directed toward identifying the insurgent infrastructure. Analysis of data collected in this effort will enable a determination of the degree of insurgent control in the different areas of the country. This information is vital in the development of programs based on logical assumptions.

b. Population and Resource Control.--The primary goal is to separate the population from the insurgents and deprive them of support. A secondary goal is to protect the population from insurgent exploitation and domination. Restrictive measures are kept to the minimum to prevent popular discontent.

c. Gaining Population Support.--Exposing, discrediting, and destroying the insurgent infrastructure will permit a reduction of the defense effort and increased use of resources to further internal development.

d. Psychological Support.--Insurgent objectives and methods must be discredited and subversive propaganda countered. Government efforts on behalf of the people are widely publicized and the duties of responsible citizens to assist in establishing a stable government are stressed. During phase II, the presence of insurgent tactical forces will require the host country to pursue tactical operations at the expense of internal development programs. This reduction serves to alienate the population. Psychological operations must place the blame for this reduction on the insurgents.

e. Concentration of Effort.--The government must decide the amount of effort which may be devoted to internal development at the expense of the effort to defeat the insurgent tactical effort. Concentration on either one will result in an imbalance which can be exploited by the insurgents.

f. Police Control.--Police efforts involve the use of repressive measures aimed at destroying the insurgent infrastructure and protective actions which isolate loyal citizens from the insurgents. Paramilitary units may be trained and used to assist.

616. POPULATION ALLEGIANCE

a. General

(1) Insurgents require popular or coerced support from the people; conversely, a prerequisite to counterinsurgency success is the separation of the dissidents from the populace. The separation may be accomplished by physical or psychological means or a combination of both depending on the circumstances. Regardless of means, the target is always the same--the people.

(2) Operations require a delicate balance between the force applied and the measures taken to relieve the sources of unrest. The basic requirement is the alignment of the people with the aims of the host country. These aims may often be realized with the presence of the military acting as a catalyst in programs of economic development, social adjustment, and welfare activities. A vigorous public relations and propaganda campaign is necessary to promote armed forces identity with civilian well-being and protection for the civilians from guerrilla depredation and atrocities.

(3) Marines should be thoroughly indoctrinated on the customs and behavioral standards of the culture(s) of the country and of the influence their behavior can have upon mission success. They should respect local customs and rights of property and person. A cross-cultural information and relations program planned and initiated prior to entry into the host country, and continued as long as Marine personnel remain there, will provide this indoctrination. Language training is desirable.

(4) In order to avoid alienating the civilian populace, population and resource control measures such as credentials, curfews, suspension of civil rights, evacuation, or relocation are kept to the minimum. When absolutely required, they are applied with fairness as well as requisite firmness. In any case, only those measures should be applied as can be enforced. Control measures which cannot be enforced will generate additional disrespect for all government activities. Buffer zones are established between the civilian population and havens such as might exist in adjoining countries.

b. Civil Affairs.--In limited and conventional warfare, civil affairs occupy a supporting role. In counterinsurgency, because of the necessity to separate the people from the dissidents, the role of civil affairs takes on increased importance. All operation plans are based on an integrated civil-military approach. The area of civil affairs is a command responsibility, and if specialist personnel are not provided, the commander must discharge his responsibilities with the resources available. (See FMFM 8-6, Joint Manual For Civil Affairs.)

c. Civil Affairs Operations.--Any project or activity of U.S. forces involving contact with civilians outside the military or designed to influence or control civilian activities can be classified as a civil affairs operation. Activities intended for the collection of intelligence are exceptions. These operations encompass everything from one Marine assisting a civilian to an entire unit providing security for crop harvest.

SECTION 7

INTELLIGENCE

701. GENERAL

Accurate, detailed, and timely intelligence is essential for successful operations against insurgent forces. To conduct counterguerrilla operations without a sound intelligence basis is to invite disaster. Effective intelligence operations must exploit all host country or allied intelligence assets. The basic inventory of intelligence on a specific area and situation is derived from area and country studies supplemented with recent operational intelligence collected on the scene. This body of data forms the basis of the commander's estimate of the guerrilla situation and the subsequent intelligence plans. Of particular importance are those aspects of intelligence activities which are devoted to neutralizing or destroying the effectiveness of the insurgent infrastructure and protecting the host country against espionage, subversion, and sabotage.

a. Popular Support.--Internal defense and development operations are dependent on intelligence because subversive insurgency depends on popular support. The population is both the target of the insurgent and a principal source of his intelligence, cover, personnel, and logistic support; therefore, the attitude of the people must be considered in addition to enemy, weather, and terrain.

b. Infrastructure.--The manner in which the insurgent forces are organized and that internal structure itself is referred to as the "infrastructure." The interlocking nature of the insurgent infrastructure presents a complex and difficult target for intelligence operations. The party control apparatus normally will have been engaged for years in the subversion of the population and is securely imbedded within the population. A thorough understanding of the insurgent infrastructure and environmental situation is essential for intelligence planning and operations at all levels.

c. Identification.--Guerrilla forces employ intelligence and counterintelligence measures which depend upon a sympathetic or, at the very best, an apathetic (i.e., Cuban Revolution in early stages) indigenous environment, and they are difficult to identify, locate, and fix. The guerrilla, by virtue of his attempts to enlist both active and passive support from segments of the local populace, presents special problems to host country and Marine intelligence and counterintelligence efforts not encountered in "conventional" operations. Before he can be separated from the civil populace, fixed, and destroyed, the guerrilla must be positively identified; all members of every combat and support echelon must be motivated and trained to participate in this fundamental task.

d. Doctrine.--The general doctrine, methods, and procedures for direction, collection, processing, dissemination, and use of intelligence are covered in FMFM 2-1, Intelligence; FMFM 2-3, Signal Intelligence/Electronic Warfare Operations (U); and FMFM 2-4, Counterintelligence. Special considerations in the production of intelligence for the conduct of counterguerrilla operations are as follows:

(1) Success in counterguerrilla operations almost invariably goes to the force which receives timely, accurate information from the local population.

(2) Political, economic, psychological, and sociological factors are of more importance at a lower level in the production of intelligence in counterguerrilla operations than in the production of intelligence in conventional operations.

(3) Collection and dissemination must be controlled closely to ensure that all agencies or forces, military and civilian, contribute to the collection effort and have access to the resulting intelligence.

(4) Countermeasures must be taken against intelligence collecting elements of the insurgents.

(5) Deception and secrecy must be emphasized to avoid compromise of plans and operations.

(6) Counterguerrilla operations will require modification or adaption of basic combat intelligence collection procedures.

(7) Surveillance may be accomplished through the use of host country and Marine Corps forces in a coordinated program employing static surveillance sites, extensive ground reconnaissance, patrolling, aerial observation, signal intelligence, and sensor/radar surveillance. Sensor/radar surveillance devices are of particular value in covering avenues of approach from remote base areas into populated areas. They are of less value in heavily populated areas.

(8) Rapid processing and dissemination of intelligence are essential. The elusiveness and mobility of small guerrilla forces quickly outdates information concerning their location. Reaction time for the conduct of combat operations is a critical factor, and reactions must be based on reliable intelligence. A concerted effort must be made by every intelligence section to rapidly develop accurate order of battle information applicable to the projected area of operations. It is absolutely essential that intelligence gathered be widely disseminated and evaluated by all commands. Furthermore, the nature of counterguerrilla warfare dictates frequent and comprehensive intelligence briefings of all personnel.

(9) Normally, a larger number of intelligence and counterintelligence personnel are required for counterguerrilla operations. Attention must be given to obtaining adequate interrogator-translators and qualified interpreters. In addition, officers and enlisted intelligence personnel must be provided to the MAGTF to permit continuous operation of the combat operations center and to staff subordinate task groupments.

702. INTELLIGENCE REQUIREMENTS

The insurgent force, the civil population, and the terrain are virtually inseparable factors in guerrilla warfare. To destroy the insurgent movement and prevent its resurgence, detailed intelligence is required on all three elements. Acquisition and dissemination of weather information is normally a matter of standing operating procedure.

a. Insurgent Force.--The following intelligence is sought concerning the insurgent force:

(1) Identification, composition, organization, and disposition.

(2) Location of guerrilla camps, assembly areas, rendezvous points, and trails.

(3) Strength and combat efficiency of guerrilla forces, to include status of training, effectiveness of communications, and morale.

(4) Insurgent methods of operations, to include politics, economics, proselytizing, propaganda, and guerrilla tactics.

(5) Guerrilla force arms and equipment.

(6) Supply sources of food, commodities, weapons, ammunition, and means of providing logistic support.

(7) Factors which caused or contributed to the development and continuing motivation of the insurgent.

(8) Relationship between the insurgent and civil population.

(9) Relationship with and degree of support from any external forces or sponsoring power.

(11) Psychological vulnerabilities.

b. Civil Population.--Because of the inseparable nature of the guerrilla force and the civil populace which usually exists, much of the intelligence developed concerning one is applicable to the other. Intelligence required concerning the civilian population is as follows:

(1) Identification of hostile, uncommitted, and friendly elements.

(2) Motivation and loyalties of various population segments.

(3) Size and proportion of civil population likely to engage in or support guerrilla activities.

(4) Effect of local authorities and police on civil population.

(5) Capability of the local populace to furnish food to guerrillas and/or friendly forces.

(6) Availability of water and fuel.

(7) Vulnerability of friendly civil populace to terrorism.

(8) Potential effect on the civil population of resource control measures such as relocation, search and seizures, movement restrictions, curfews, food and commodity controls, pass and log systems, and suspension of certain civil liberties.

(9) Psychological vulnerabilities.

(10) Relationship of local authorities and police with the guerrilla force operating in the local area.

c. Terrain.--An intimate knowledge of the terrain is necessary for the conduct of counterguerrilla operations. The collection of terrain information is a continuous process. Area maps are quite often inaccurate, out of date, or a combination of both. All elements of the counterinsurgency forces should note terrain features, distances, and any other distinguishable features that can be used in upgrading terrain information. The resulting intelligence is promptly disseminated usually via special photo studies, reports, and overlays contained in intelligence estimates, special reports, or annexes to operations plans and orders. Particular attention is directed toward collecting information concerning the following:

(1) Areas likely to serve as guerrilla bases or secure areas. Such areas usually have the following characteristics:

(a) Difficulty of access, as in mountains, jungles, or swamps.

(b) Concealment from aerial reconnaissance.

(c) Covered withdrawal routes.

(d) Located within one day's fast movement from small civilian settlements that could provide food, information, and warning.

(e) Adequate water supply.

(2) Roads and trails approaching, traversing, and connecting suspected or known guerrilla areas.

(3) Roads and trails in the vicinity of friendly installations and lines of communication.

(4) Location of critical fords, bridges, and ferries; information on seasons when the streams are at flood stage.

(5) Areas where drinking water is not available.

(6) Areas where foot travel is difficult.

(7) Availability and suitability of potential helicopter landing sites.

(8) Location of likely guerrilla or counterguerrilla ambush sites.

(9) Location of small settlements and farms in and near suspected guerrilla areas.

(10) Location of areas suitable for airdrops, boat or submarine rendezvous, and roads and trails leading into external area of sponsoring power or neutral country friendly to the guerrillas when guerrillas are known or suspected to have contact with an external sponsoring power.

(11) Location of all known or suspected harboring sites for the guerrilla force.

(12) Location of all known or suspected guerrilla strongpoints, field fortifications, weapons emplacements, and antiaircraft positions.

(13) Availability and suitability of potential fire support base sites (see sec. 9).

703. FUNCTIONS IN A COUNTERINSURGENCY ENVIRONMENT

a. Modifications.--The nature of the enemy, the tactical deployment of friendly units, the presence of both friendly and hostile citizens, and the presence of indigenous military and paramilitary units dictate modification of normal intelligence procedure. Intelligence section/division organization and functions are modified as required at all levels of command having an intelligence section/division. The criteria is the nature and extent of the intelligence effort required to support the mission, availability of qualified personnel within the landing force as a whole, and the personal preferences of the intelligence officer and the commander. Combat operations normally will require augmentation with interrogator-translators, air observers, counterintelligence personnel, order of battle analysts, interpreters, sensor imagery interpreters, reconnaissance and surveillance specialists, and technical intelligence personnel.

b. Counterguerrilla Intelligence Functions.--The intelligence section at landing force level may be organized by the establishment of special subsections to accommodate a special function. For example, a covert collection unit may be required to supervise agent activities. A records subsection may be created to develop and maintain information concerning the civil population and guerrilla force. The most important counterguerrilla intelligence functions include the following:

(1) Combat Intelligence.--The primary requirement of combat intelligence is to locate the guerrilla force. Emphasis is placed on overt collection of information, and most of the functions of the conventional combat intelligence subsection are applicable. Special attention is given to the rapid processing and dissemination of intelligence. Careful attention to seemingly minor guerrilla preparations and activities is essential to the development of meaningful intelligence on impending guerrilla operations.

(2) Clandestine Collection.--Clandestine collection of information is extremely important in counterguerrilla operations. Every effort is made to infiltrate the guerrilla force and hostile civilian elements with reliable agents. Indigenous persons are usually capable of infiltrating the guerrilla force; they have an intimate knowledge of the local populace conditions and the terrain. In addition, they often have prior knowledge of, or connections with, members of the guerrilla force. Potential agents must be carefully checked by background investigations and constantly screened after hiring to ensure they are not engaging in double agent practices. The recuiting, training, and handling of agents require highly trained intelligence personnel who have the ability to rapidly establish rapport with the indigenous people. Because of the sensitive nature of agent operations and the emphasis placed on clandestine collection, this function is usually separated from the combat intelligence subsection. Clandestine collection of intelligence must be closely coordinated at the highest level of command having cognizance over the specific area of operations. Normally, clandestine collection responsibilities will be assigned to counterintelligence personnel who have received special training in this function.

(3) Aerial Reconnaissance.--Functions of the aerial observer subsection are essentially the same as for conventional operations. Special attention is directed toward preplanned and on-call reconnaissance and observation missions in direct support of widely separated battalions and smaller units. Included will be a continuing requirement to ensure, under various tactical situations, compatibility of communication equipment and frequency assignments between supporting aircraft and the supported ground element, particularly with regard to units smaller than battalions. See section 9 for details on aerial reconnaissance.

(4) Ground Surveillance and Reconnaissance.--Ground surveillance specialists should be tasked to employ electronic devices (i.e., ground sensors, radar, etc.) on avenues of approach from base areas into the populated areas. Mobile surveillance of enemy base areas should be performed by deep reconnaissance patrols inserted by clandestine means. In all cases, surveillance and reconnaissance personnel must be supported by available fire support elements and be provided with sufficient communication equipment to ensure timely reporting to appropriate commanders.

(5) Psychological Operations (PSYOP).--Intelligence is vital to a sound PSYOP program since population attitude and behavior ranges from passiveness to hostility and must be reshaped into genuine acceptance of the host country's effort. The added emphasis of PSYOP requires that all intelligence be evaluated in terms of psychological application. The efforts of the intelligence section and the PSYOP agencies are closely related. In supporting intelligence operations, the PSYOP objective is to convince the entire population that providing intelligence information to the government forces is to their benefit. PSYOP uses all means of communication to inform the people that:

(a) Strangers, suspicious persons, and unusual activities must be reported. Methods of reporting also should be explained.

(b) Rewards are available for specific types of information, to include information leading to the apprehension of insurgents and capture of their equipment and weapons.

(6) Biographic Data.--Records on guerrilla commanders and key members of the civilian hostile population should be maintained. Frequently, the operations or behavior of these individuals develop a pattern which, if recognized, may aid materially in the conduct of operations against them. The names and locations of families, relatives, and friends of known guerrillas are obtained and recorded. These persons are not only valuable sources of information, but they may be used as a lure for trapping guerrillas. In communities friendly to the insurgent forces, some persons are responsible for collecting food and providing other aid for the guerrillas such as relaying messages and providing temporary security. Determined efforts must be applied in ferreting out these people. Instead of immediate arrest, it is usually advantageous to maintain close surveillance over their activities and seek to apprehend guerrillas contacting them. Establishment and maintenance of records concerning black and gray lists should be restricted to those units having the capability to administer them. Such efforts should be coordinated and supervised by the counterintelligence team assigned to the landing force.

(7) Interrogator-Translators and Interpreters.--Fleet Marine Force interrogation-translation teams (ITT's) are limited in numbers and language spread. Consequently, commands preparing for operations against guerrilla forces should utilize available personnel that have the appropriate language facility and document-reading capability to assist unit intelligence personnel. Commands must have a system that identifies personnel with a language capability and permits their immediate availability for tasks requiring the use of that language. These personnel must be afforded maximum possible combat intelligence training prior to operations. They may be integrated into the intelligence section of tactical units or be assigned as augmentation to, and operate under, interrogation-translation teams. In cases where personnel with language capabilities are not available, landing force commands will normally utilize host country armed forces personnel and/or employ indigenous personnel as interpreters and documents translators for duty with interrogation-translation teams. However, it is essential that these personnel be carefully screened and constantly supervised by qualified intelligence personnel. Because of general lack of military background of indigenous personnel, bilingual dictionaries should be obtained to assist in their training.

(8) Counterintelligence.--Guerrilla forces depend primarily upon secrecy and surprise to offset the superior combat power of the counter-guerrilla force. Since the degree of surprise achieved will depend largely on the effectiveness of the guerrillas' intelligence agencies, intensive effort must be made to expose, thwart, destroy, or neutralize his intelligence system. Counterintelligence increases the security of all friendly forces and increases the probability of attaining surprise in operations against guerrilla forces. Adequate security measures must be developed and continuously enforced to prevent penetration of the intelligence operation by insurgent elements. Marine Corps commanders, in coordination with host country authorities, will habitually place emphasis on the following counterintelligence denial, detection, and deception measures:

(a) Denial Measures

1 Removal of compromised informant sources from the area of operations.

2 Restrictions on physical movements between and within certain areas, and control and restricted use of communication facilities.

3 Thorough briefing of selected U.S., allied, and host country personnel on intelligence practices and techniques.

4 Emphasize the procedures for the secure disposal of waste material.

5 Employment of silent weapons by patrols.

6 Normal activity while preparing for operations to preclude any indications to the insurgent force of a change in normal routine.

7 Maintenance of strict security concerning current or projected logistic movements.

8 Conduct of major troop movements under the cover of darkness or during inclement weather by the most rapid means available.

9 Friendly unit standing operating procedures (SOP's) constitute a potentially valuable source of information for the insurgent. The uncontrolled circulation of these documents presents the insurgent with the opportunity to derive extensive information pertinent to friendly activities in many fields. While most SOP's are not of a classified nature, they should, nevertheless, be closely controlled.

(b) Detection Measures

1 Background investigations and screening of all civilians employed by, or operating with, U.S. and host country forces and in civil positions. Particular attention must be given to indigenous guides or scouts who are familiar with the location and disposition of friendly forces.

2 Constant surveillance of all known or suspected members of the guerrilla force and the infrastructure.

3 Extensive employment of trip flares and boobytraps in areas of suspected guerrilla reconnaissance activity.

4 Employment of dogs in conjunction with other security activities.

5 The clearance of vegetation and the plowing of areas to provide indications of movement across the areas.

6 Monitoring civil communication media.

7 Maximum emphasis on visual and electronic observation; augmentation of organic visual aids and electronic detection.

8 Surprise relocation and counterintelligence screening of the entire population of settlements suspected of intelligence activities in support of the insurgent forces.

9 Wide distribution of photographs of known guerrilla or key infrastructure personnel to assist in their apprehension.

10 Offering rewards for information leading to the capture of informants or other agents in support of the insurgent forces;

special emphasis will be placed on the apprehension of infrastructure personnel.

11 Identification systems to minimize the possibility of guerrillas or members of the infrastructure gaining access to installations or moving freely.

(c) Deception Measures.--Deception measures are used to mislead the insurgent forces as to the true capabilities, intentions, or locations of counterguerrilla forces. Such measures include feints, ruses, demonstrations, communication deception, and the leaking of false information. Deception measures depend upon complete security for success, and special precautions are taken to ensure that there is no leakage of information.

(9) Signal Intelligence.--The effective employment of signal intelligence (SIGINT) in direct support of the landing force engaged in counterinsurgency operations can provide tactical commanders with information which, when processed and collated with information obtained from other intelligence collection activities, will result in the production of reliable combat information such as the identification and general location of enemy units, terrain and weather conditions, and the extent of possible compromise of friendly plans and intentions. However, successful SIGINT activities depend largely on the proficiency and security consciousness of enemy forces, associated communications and electronics equipment, and the deployment of friendly units with respect to the enemy and his communication transmitters.

704. COLLECTION AGENCIES AND SOURCES

a. Collection Techniques.--Speed is essential in collecting, evaluating, and disseminating intelligence information to concerned tactical units. Standard collection techniques will be employed as well as expedient and improvised techniques. Sources of information and collecting agents include the following:

(1) Trained intelligence agents.

(2) Intelligence specialists.

(3) Host country's government.

(4) Hostile activity.

(5) Captured personnel, documents, and material.

(6) Studies and reports.

(7) Photographs and maps.

(8) Civilians who can be induced to report on the activities of guerrillas in the area.

(9) Guerrilla communications. Radio is normally the primary means used by the guerrilla for command and control. Efforts should be applied to intercept and break insurgent codes. Radio frequencies may be jammed to deny the use of radio frequencies; however, before directing

that a local radio station be jammed or destroyed, consideration should be given to the resulting loss of a source of information.

(10) Police intelligence network. The daily contact with the population makes the police an important source of information to newly arriving counterinsurgency forces. Police records can pinpoint the criminal element and dissidents that provide a fertile recruiting ground for guerrillas.

b. Unit Collection Effort.--Units and individual Marines play a prominant part in the collection effort. All personnel must realize the importance of reporting all information which they obtain about the guerrilla force, civil population, and the topography of the area. Every piece of information, no matter how insignificant, must be reported as accurately as possible. Sources from which information is obtained include but are not limited to the following:

(1) Patrol Reports.--A primary source in the collection effort is the patrol report regarding food cultivation, food dumps, camps, trails and roads, arms and ammunition, mines and explosives, and equipment and tactics. (See FMFM 6-5, Marine Rifle Squad.)

(2) Surrendered and Captured Guerrillas.--A surrendered guerrilla can be an extremely valuable source of information for both immediate tactical exploitation or for developing intelligence on a broader scale. They can be particularly exploitable in the role of returning to guerrilla-held areas to gain additional information or solicit further surrenders. Care must be taken in handling surrendered or captured guerrillas in order to avoid nullifying the psychological advantage gained. The following points must be considered in each case:

(a) The first condition for a quick and effective interrogation is the availability of specialists perfectly versed in the techniques to be employed, and who fully understand what they can profitably ask the subject under interrogation. To do this, it is essential to be able to place the subject precisely within the structure of the organization to which he belongs. This poses the requirement for interrogators to be thoroughly versed in the insurgent organization. Only then can the interrogator ascertain those areas in which the subject would be knowledgeable. Given the compartmented nature of insurgent activities, the insurgent ordinarily knows only his duties, his immediate associates, and his superior. It would be pointless to question a captured assassin about the insurgent tax collection structure in his district, since he would know nothing of it. The initial interrogation should be confined to areas in which the subject has knowledge and should be concluded quickly so as to be fully exploited.

(b) Avoid "advertising" the fact that a guerrilla is a prisoner until authorities vested with the responsibility for using prisoners have decided how best to exploit him.

(c) Strictly prohibit abuse, maltreatment, or harassment of surrendered or captured prisoners.

(d) Restrict interrogation to a minimum number of personnel and ensure that interrogation is accomplished by trained interrogators whenever possible.

(e) Expedite transfer of captured guerrillas to the landing force collection point for processing. Immediate exploitation of the captive by the capturing tactical unit should be undertaken only when such exploitation will result directly in saving lives or when a substantial tactical advantage can be expected from such exploitation. Any retention must be reported immediately, and lengthy retention must be approved by the landing force headquarters.

(3) Captured Documents.--All captured documents should be forwarded immediately to the landing force intelligence section for translation. In cases where interrogator-translator subteams are directly supporting widespread tactical units, these personnel may initially screen captured documents prior to forwarding to higher headquarters. To ensure prompt processing of documents, the following considerations must be kept in mind:

(a) Do not separate documents captured together. Documents must be translated and analyzed in context with each other to be meaningful.

(b) Use capture tags and securely attach to the document or package of documents to note identification and capture circumstances. Improper identification or failure to identify such intelligence material may negate the value of an otherwise extremely important find.

(c) Do not deface or write directly on the surface of any captured document.

(d) Make every effort to keep documents dry. If documents are wet when captured, and the situation permits, dry by airing prior to forwarding.

(e) Forward all personal effects such as wallets, letters, diaries, etc., intact, annotating the content on the capture tag.

(4) Enemy Dead

(a) In some cases, the identification of the dead is the only means of identifying the enemy organization or organizations which are operating in the area. Identification can usually best be accomplished by on-site inspection of dead guerrillas and interrogation of prisoners and local inhabitants by intelligence personnel.

1 If on-site inspection is not feasible, or if bodies are believed to be of special significance or require special attention in identification, they should be delivered to a higher echelon intelligence section via the most rapid mode of transportation available.

2 Ground evacuation should not be undertaken if decomposition has set in or will set in prior to delivery.

3 Under no circumstances will identification tags be removed by anyone, including intelligence personnel.

4 Dead guerrillas exhumed and found to offer no special intelligence should be reinterred.

(b) Identification procedures can be conducted on the spot and include the following techniques:

1 Photographs.--For successful photography of a body with distinguishable flesh, the face should be washed and the hair pushed back from the face. The eyes should be open. Close-range views of the face, front and profile, and of the body should be taken.

2 Fingerprints.--Fingerprinting is usually of value only when like records have been enforced by the host country. For details on fingerprinting procedures, refer to NAVMC 2509-A, Handling of Deceased Personnel in Theaters of Operation.

3 Description.--The following information is required to establish a description:

a Sex.

b Race.

c Apparent age.

d Height, build, and facial features.

e Teeth, scars, and deformities.

(5) Information Obtained From Civilians and Agents.--Exploitation of the civilian sources of information normally requires a sophisticated intelligence organization which is resident within the populace. As the counterguerrilla campaign progresses, the civilian populace can be expected to volunteer increasing amounts of information. Agents are handled as discussed in paragraph 703. Normally, subordinate units of the landing force should not develop their own agents or informers to acquire information. Persons claiming to be agents should be detained and segregated and counterintelligence personnel contacted for disposition. The information derived from civilian or agent sources normally may be expected to encompass the following:

(a) Details of the local terrain.

(b) Ideological motivation and sympathies of local residents.

(c) Logistic support available, or potentially available, to guerrillas operating in the area.

(d) Potential guerrilla targets or objectives, and dates and times pertaining to them.

(e) Identification of members of the guerrilla force and infrastructure.

(f) Sabotage, espionage, and terrorism techniques and objectives of the guerrilla and infrastructure.

(g) Weaknesses and vulnerabilities of the guerrilla force.

(h) Psychological operations of the guerrilla force and the resulting impact on the local population.

(6) Communications

(a) Networks.--The highly compartmented nature of clandestine organizations forces a reliance upon well-run communication networks to ensure coordination of the various elements. The identification and delineation of these networks will serve to reveal the entire structure of the organization they serve. Information that will aid in the identification of communications may be derived from the activities illustrated below:

1 The identification of couriers/commoliaison agents; the controlling agency, routes, stations, and persons contacted.

2 The location of letter drops and the identification of persons who deposit and receive material.

3 The location of land lines and terminals which service them.

4 Net reconstruction of radio transmissions.

(b) Equipment.--All captured communication equipment should be recovered for inspection. Captured equipment is expeditiously reported to the unit intelligence section. Frequency dials and power settings are carefully noted before the equipment is moved and, if possible, locked to prevent change during transit. Units capturing guerrilla equipment should note the following:

1 Type of equipment (i.e., transmitter/receiver, transmitter or receiver).

2 Make, name, and number identifying the equipment.

3 Location at the time of capture.

4 Frequencies and power settings shown on dials at the time of capture.

5 Direction of the antenna (including compass bearing).

(c) Monitoring.--Units receiving a signal of unknown origin should immediately report it to the intelligence section. This report will include frequency and call sign. All information that can be comprehended during the monitoring is sent to the intelligence center.

(d) Documents.--Documents relating to communications and those found in proximity to communication equipment are screened for information that might be of immediate value to the tactical operation then forwarded to the intelligence center.

(7) Food Cultivation

(a) Guerrillas may be forced to cultivate lands to supplement food supplies or to establish a basic source. If such cultivated areas are discovered, the crops are destroyed or used as a lure to trap the guerrilla. In areas settled with civilians, cases will arise where

cultivated land areas may appear excessive to the needs of the dependent civilians. In such cases, expert advice will be sought to determine if the land area under productive cultivation is sufficient only for the local population, or if it is so large that guerrillas may live off of it as well.

(b) Units discovering cultivation will report the following information:

1 Location.

2 Size.

3 Type.

4 Condition; e.g., Stage I: natural vegetation freshly cut; Stage II: cut and cleared; Stage III: prepared and hoed; Stage IV: growing crops tended; Stage V: growing crops untended; Stage VI: harvested; Stage VII: disused and overgrown.

(8) Arms and Ammunition

(a) Most of the weapons and ammunition recovered as a consequence of tactical operations will be a mixture of those of foreign nations to include our own. Statistical data must be maintained on weapons and ammunition that have been captured by the counterguerrilla forces. Technical intelligence plays an important role in the maintenance of such data and in determining its overall significance. However, capturing units must initiate the sequence of intelligence collection by reporting captured items immediately.

(b) The discovery of arms caches may occur frequently. At times, on-the-spot analysis may have to be conducted by technical intelligence functional teams. The entire analysis effort can be materially assisted by proper orientation of Marines in arms of the guerrilla forces, and by placing proper emphasis on the "Items-Wanted List."

(c) All new ordnance items and those encountered in an area for the first time, including mines, explosives, and boobytraps, will be recovered, deactivated by trained personnel, and forwarded to the intelligence section for technical analysis whenever possible; otherwise, technical intelligence personnel should make on-the-spot examination of the items. In any case, a full report should be made by the capturing unit giving circumstances of capture, location, types, quantities, apparent conditions, identification makes/numbers, and any technical data.

(9) Aerial Reconnaissance.--Aerial reconnaissance, both visual and photographic, is discussed in section 9.

(10) Local Military and Civil Authorities.--Close liaison must be maintained at all levels of command with local military and civilian authorities. The use of liaison officers at local military and governmental headquarters is advisable on a continuous basis in order to exploit the information available to those agencies. Their assistance in identifying local loyal elements and guerrilla forces must be solicited. Their knowledge of local terrain must be exploited. The information obtained should be processed through unit intelligence channels.

(11) Ground Reconnaissance.--An aggressive program of ground reconnaissance must be conducted to find guerrillas. Agent and other reports of movement and location of guerrilla elements can be used as a basis for determining the areas to be covered by fixed and moving ground reconnaissance units. Particular attention should be paid to coverage of suspected enemy base areas.

(12) Insurgent Logistics.--Carefully planned intelligence efforts must be directed at identifying the insurgent logistics network. The nature of insurgent warfare dictates that supplies precede the armed forces into the battle area, rather than follow it, as is the case in conventional warfare. This need to "prepare the battlefield" constitutes a potentially crippling setback to the insurgent armed activity. Intelligence which reveals the routes, transportation means, trans-shipment points, storage areas, and other logistic activities of the enemy presents the friendly commander with the opportunity to destroy the insurgents' ability to fight by depriving them of the means to do so.

705. AREA STUDIES

An essential in counterinsurgency operations is a thorough understanding of all aspects of the area and the society augmented by a complete understanding of the prevailing internal and external forces supporting the guerrilla force and its infrastructure. The information obtained in the planning stage will reveal areas in the political, economic, and social structures that need improvement. Area studies performed prior to and during the time Marine forces are in country are most helpful in understanding the makeup of the country. Appendix A is a sample of what should be included in an area study.

706. INSURGENT AS A TARGET

a. Leadership in Insurgencies.--Despite a carefully cultivated public image as a "people's army," insurgent movements require forceful and determined leadership at all levels. It is precisely this leadership which constitutes both the greatest strength and the most serious potential vulnerability of the movement. In a strictly regimented hierarchy, where subordinates are confined to the role of "followers," the leader becomes the driving force which provides impetus and direction to the activities of the unit. He is the only member of the unit privy to the decisions and plans of the next senior element. The activities of his subordinates are dependent upon his directions. Armed or unarmed, whatever its function, the unit depends upon its leader in all operational matters. If the leader can be removed by any means, this function will be severely disrupted, and the unit becomes susceptible to friendly action during the time required for a new leader to emerge. Intelligence activities directed at identifying and removing insurgent leadership can thus be seen as a potentially highly profitable endeavor. While admittedly difficult, such activities have been successfully conducted in the past, and have proven extremely detrimental to the hostile force against which they were directed.

b. Leadership Characteristics in Insurgencies.--Not surprisingly, the same leadership qualities which make a successful Marine officer or NCO, play an important role in the personality of insurgent leaders. Such qualities as moral and physical courage, loyalty, force, initiative, and judgment are universal among leaders in many fields. In addition, the insurgent leader will very likely possess other character traits that will suit the peculiar conditions of his activities.

(1) He is a highly motivated and dedicated believer in the cause which he serves.

(2) While his education level may vary widely among others of his kind, he is highly intelligent.

(3) He is a strong, forceful individual, who can be said to "walk on his hind legs."

(4) Within the doctrine of his belief, he is very flexible and persistent, always seeking a means to accomplish his objective.

(5) Emotional stability and mental alertness invariably mark his personality.

c. Insurgent Leadership Background.--Just as certain character traits mark the insurgent leader, so do conditions peculiar to the nature of insurgencies mark his background and manifest themselves in his activities.

(1) While he is a member of an illegal organization, he almost always maintains a legal identity and status.

(2) In many cases, he has a personal grievance against the existing power structure, which quite often may be fully documented in official files.

(3) The nature of his position as a leader requires him to be an active recruiter.

(4) He has a unique mission and does not function in insurgent areas other than his own. In this respect, his associates are generally those with an identical, or closely related, mission.

(5) While he is native to the area, his technical and ideological training is often received outside the area.

(6) He faces significant problems in arriving at plausible reasons for his absences from his legal identity occasioned by his illegal activities.

APPENDIX A

AREA STUDY

1. PHYSICAL FEATURES

    a. General topography.

    b. Hydrography and water supply.

    c. Climate.

    d. Major lines of communication.

    e. Major natural resources.

2. SOCIOLOGY

    a. Historical background.

    b. Culture and customs.

    c. Ethnic characteristics and distribution.

    d. Language.

    e. Population distribution.

    f. Local (village) society.

    g. Land ownership and tenure.

3. GOVERNMENT

    a. Form and development of government, organization and method of operation.

    b. Head of state, political leaders.

    c. Analysis of political parties.

    d. Political subdivisions.

    e. Regional and social differences.

    f. Foreign policy, relations with neighboring states, membership in international bodies, treaty obligations.

    g. Public administration and local government.

    h. Corruption, despotism, social injustices.

4. LEGAL

    a. Basic legal system.

b. Local claims system and procedures.

c. Real property rights.

5. EDUCATION

a. Basic system of education.

b. Advanced education.

c. Technical training.

d. Major educational installations.

e. Student groups.

6. FINANCE

a. Method of financing government.

b. Currency system.

c. Banking system.

d. Financial status.

7. PUBLIC SAFETY

a. Police system.

(1) National.

(2) Local.

b. Identification and record system.

c. Organized crime.

d. Type, frequency, and trend of offenses.

e. Civil defense system.

f. Fire-fighting system.

g. Confinement facilities.

h. Paramilitary organizations.

8. PUBLIC HEALTH

a. Public health system.

b. Availability of trained medical personnel.

c. Hospital and dispensary facilities.

d. Endemic and epidemic diseases.

e. Sanitation, water supply, waste disposal.

f. Preventive medicine.

g. Availability of drugs, vaccines, and medical equipment.

9. PUBLIC WELFARE

a. Emergency shelter and feeding facilities.

b. Orphanages, homes for aged, handicapped care, and child care centers.

c. Private relief agencies in country.

d. Farmer or fishermen's co-ops.

e. Political orientation of organized labor.

f. Wage and manpower scales and controls.

10. ECONOMICS

a. Economic development.

b. Production capacity.

(1) Agriculture.

(2) Minerals.

(3) Manufactured goods.

(4) Shipbuilding and repair.

(5) Auto and aircraft construction or assembly.

c. Foreign trade.

(1) Exports.

(2) Imports.

d. Flow of material and distribution.

e. Food or fuel shortages.

f. Housing.

g. Undistributable surpluses.

h. Extent of foreign interests.

i. Economy of local social units (villages).

j. Essential areas.

k. Price controls and rationing.

11. AGRICULTURE

a. Principal agricultural resources.

(1) Animal husbandry.

(2) Fishing.

(3) Grains.

(4) Fruits and vegetables.

(5) Forest products.

(6) Agriculture for industrial use.

b. Availability of land.

(1) Cultivated.

(2) Uncultivated.

c. Fertilizer use and production.

d. Irrigation and drainage.

e. Insect and rodent control.

f. Principal harvest seasons.

g. Flood and drought areas.

h. Control of agricultural assets.

i. Public or institutional land holdings.

j. Distribution of food resources.

12. PUBLIC FACILITIES

a. Public works and utilities.

b. Public telecommunications.

(1) Telephone.

(2) Telegraph.

(3) Cables.

(4) Radio.

c. Public transportation.

(1) Roads and bus service.

(2) Railroads.

(3) Inland waterways.

(4) Coastal shipping.

(5) Commercial air service and facilities.

d. Ownership of public facilities.

13. RELIGION

a. Principal religions, origins, and basic philosophies.

b. Minority religions, origins, and basic philosophies.

c. Religious group interactions.

d. Major religious installations.

e. Sacred places.

f. Religious restrictions.

14. ARTS, MONUMENTS, AND ARCHIVES

a. Significant cultural or historical objects.

b. Archive repositories.

15. PUBLIC MEDIA

a. Newspapers.

b. Major magazines.

c. Radio and television.

d. Motion picture industry.

e. Ownership and control of public media.

NOTE: A more detailed outline and instructions as to how to write and where to find the information for the area study can be found in appendix J of FM 41-10, Civil Affairs Operations.

FM 3-06 (FM 90-10)

URBAN OPERATIONS

JUNE 2003

HEADQUARTERS, DEPARTMENT OF THE ARMY

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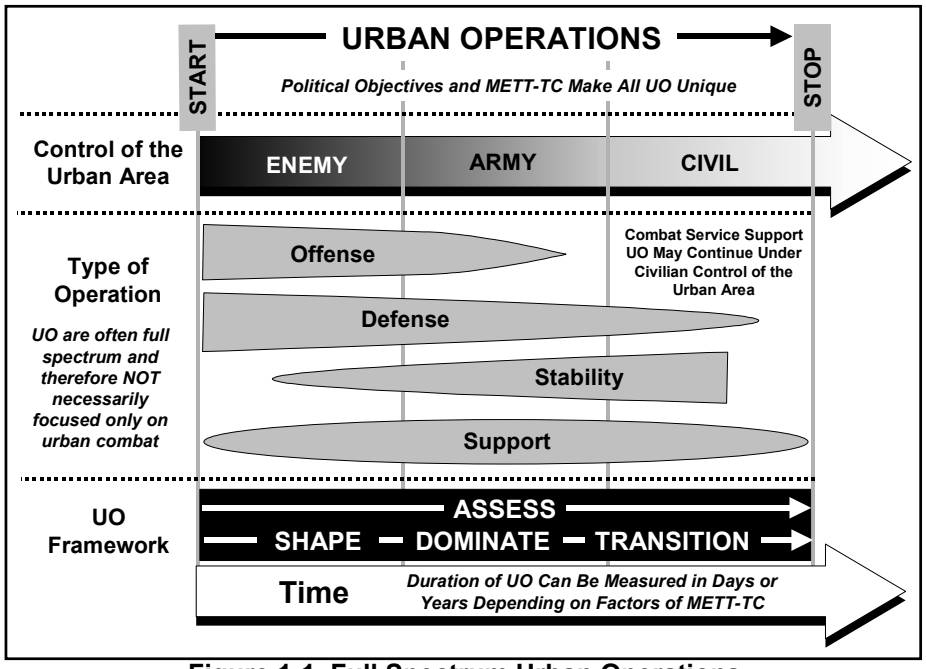

Figure 1-1. Full Spectrum Urban Operations

1-3. When conceptualizing urban operations, commanders understand two important terms: urban area and urban environment. The first is a subset of the second. An ***urban area*** **is a topographical complex where man-made construction or high population density is the dominant feature.** Focusing on urban areas means concentrating on the physical aspects of the area and their effects on tactics, techniques, and procedures. The ***urban environment*** **includes the physical aspects of the urban area as well as the complex and dynamic interaction and relationships between its key components—the terrain (natural and man-made), the population, and the supporting infrastructure—as an overlapping and interdependent system of systems.** Critical elements of the infrastructure may lie far beyond the area's physical confines. For example, the generating source providing power to the urban energy system is part of that system but may be located well outside of the urban area. Similarly, effects of the interaction between components of the infrastructure, located both inside and outside the urban area, extend well into smaller, neighboring urban areas and surrounding rural areas and often form their political, economic, and cultural focus. Understanding the total urban environment is essential to planning and conducting the full range of Army urban operations across the spectrum of conflict.

HISTORICAL SIGNIFICANCE OF URBAN AREAS IN WARFARE

1-4. Urban areas always have been central to, or have significantly influenced, military operations. One of the first urban-centered battles was the siege of Troy at the beginning of Greek history. Moreover, much of the history of early Greece revolved around wars between its city-states or with Persia and centered on the conquest, siege, or blockade of cities. Five

hundred years later, the Roman Empire replaced Greece as the dominant world power although urban areas remained central to Roman warfare. Even Rome's history can be viewed as a microcosm of urban warfare over the past two thousand years. Though military operations within the physical confines of many of these historic urban areas were not the norm, *the focus* of these operations was their conquest or control.

Rome
A Microcosm of Urban Warfare

During two millennia, Rome has been the center of at least 12 battles. The Gauls lay siege to Rome first in 387 BC. That first siege lasted six months and ended after the barbarians burnt much of the city. The surviving patrician families paid a ransom for the withdrawal of Brennus' army. From 408 to 410 AD, the Goth leader, Alaric, successfully besieged Rome no less than three times. The Byzantine General Belisarius captured Rome twice from the Goths and withstood siege inside the city once between 536 and 549. Five hundred years later in 1084, Norman adventurer Robert Guiscard captured medieval Rome and sacked the city during a dispute between the Pope and the Holy Roman Empire. Forces of the Holy Roman Empire again stormed and captured the city to punish the Pope in 1527. During the Italian Revolution in 1849, a French army supporting the Pope captured the city from the Italian revolutionary army under Garibaldi. In 1944, the last military action took place in and around Rome when the US Fifth Army captured the city from the retreating German army. Rome's turbulent history—fought over ethnic and religious differences, prestige, and military necessity—demonstrates the importance of urban areas in warfare and the various causes and combatants within this complex environment.

1-5. Although Rome last saw combat in 1944, urban areas have been no less prominent in warfare since that time. Beirut in Lebanon, Grozny in Chechnya, and Sarajevo in Bosnia-Herzegovina have been centers of conflict in the last 50 years. Urban areas, now more pervasive than ever before, will continue to be essential to successful operational and strategic warfighting. Today, armies cannot execute major military operations without the influence of surrounding urban environments (with the possible exception of the open desert).

STRATEGIC IMPORTANCE OF URBAN AREAS

1-6. Several reasons have attracted (and continue to attract) armies to combat in urban areas:

- A military force chooses to position itself in an urban area to capitalize on the perceived advantages offered by the environment. In contrast, an opposing force, by analyzing the factors of the situation, determines that it must enter the urban area to attack and destroy its enemy (or devote essential combat power to their isolation).
- The urban area's infrastructure, capabilities, or other resources have significant operational or strategic value.
- The urban area has significant symbolic importance.

- The urban area's geographical location dominates a region or avenue of approach.

1-7. Russia's 1994 experience in Chechnya illustrates an increasingly important motivation for conducting urban operations. The Chechen rebels, after failing to engage Russian forces outside the city, chose to turn Grozny into the battlefield. Leaders of the defeated Chechen conventional forces recognized that fighting in the urban area provided them their best chance for success. The complexities of urban combat and the perceived advantages of defending an urban area mitigated their numerical and technological inferiority. The urban area provided the Chechens protection from fires, resources, interior lines, and covered and concealed positions and movement. Given such advantages offered by the environment, smaller or less-sophisticated military forces have similarly chosen to fight in urban areas.

1-8. Such advantages of operating in an urban environment also prompt forces to conduct an urban operation to facilitate a larger campaign plan and decisive battle in another location. The urban operation can focus the enemy on the urban area and allow other forces to conduct operations elsewhere. From a defensive perspective, an urban defense may gain time and space to reorganize forces in new defensive positions, to divert enemy forces from other critical tasks, or to prepare to conduct offensive operations. To some extent, these reasons motivated Soviet forces defending Leningrad and Stalingrad from the Germans in World War II. The stubborn defense permitted the Soviets to reorganize for later offensive operations. From an offensive perspective, an attack on an urban area may be a shaping operation used to divert resources from the decisive operation that will follow.

1-9. Armies also fight in an urban area to obtain some critical feature or resource in the area, such as a port facility. The desire to control an important seaport and access to the Persian Gulf largely motivated the Iranian and Iraqi struggle for Basra in the 1980s. Earlier, in 1944, British forces fought German units in Arnhem for control of the Rhine River Bridge. Other infrastructure of the urban environment may have operational or strategic significance and can compel military forces to attack or defend the area. As urban areas account for an increasing share of a country's national income, often generating over 50 percent of gross national product, the strategic implications for their control or influence become even greater.

1-10. Urban areas are often located on terrain that dominates a region or an avenue of approach. In these cases, offensive armies capture these areas to proceed with security to another objective. Conversely, defensive forces commonly defend the area to deny the area of operations. To illustrate, Cassino, Italy stood astride the critical highway approach up the Liri valley to Rome. The allies had to attack and capture the monastery to facilitate the allied offensive north. Cassino's location made bypassing virtually impossible. Likewise, Israeli army urban operations in Beirut were (and have continued to be) a result of its strategic location near the Israeli security zone; various Arab insurgent and terrorist groups used Beirut as a base for attacks against Israel. Beirut evolved as the major base of the Palestine Liberation Organization, a major opponent of Israel. Beirut's location made it a security threat to Israel and thus compelled several major Israeli operations in the urban area (see Appendix A).

1-11. Another reason for engaging in urban operations is the symbolic—historical, cultural, political, and even economic—importance of many urban areas. Often, capital cities—such as Rome, Paris, Seoul, and Berlin—are identified as the strategic centers of gravity of their respective nations. Possessing or threatening these urban areas may impact directly on the outcome of a conflict. The objective of Germany's wars with France in 1870 and 1914 was ultimately Paris. Napoleon's 1812 campaign had as its objective Moscow, as did Hitler's 1941 offensive into Russia. The objective of the Soviet 1945 offensive was Berlin, and the North Vietnamese 1975 offensive had as its objective the South's capital of Saigon. Still, history also reminds us that commanders assess the sustainability and decisiveness of operations directed toward these "prestige" objectives. For example, in 1812, Napoleon captured Moscow but had to evacuate it within 30 days. He lacked supplies and shelter, failed to destroy the Russian Army, and failed to defeat the political will of the Czar and the people. Similarly, the North Korean occupation of Seoul during the Korean War was equally indecisive.

US ARMY'S EXPERIENCE IN URBAN OPERATIONS

1-12. The US Army has a varied history of conducting operations to attack or defend larger urban areas. The American Revolution saw the Army conduct several urban operations. These operations included the unsuccessful defense of New York, the successful attack on Trenton, and the decisive siege and attack on British forces at Yorktown. The Mexican War also had a successful assault on the fortified city of Monterey and the decisive siege of Mexico City. During the American Civil War, the armies, in the tradition of Napoleonic maneuver warfare, avoided urban areas and fought in the open. However, the opposing armies frequently made urban areas their objective because of their importance as railheads. Success in the siege of several key urban areas—Vicksburg, Atlanta, and Petersburg—contributed to the Northern victory.

1-13. Following the Civil War, the US Army faced no large-scale urban combat for several generations. The Indian Wars, the Spanish-American War, the Philippine Insurrection, and even World War I did not require the Army to fight in large urban areas. Between the Civil War and World War II, the US Army fought in several urban areas worldwide supporting US commitments. These limited urban combat operations were small but essential parts of what were urban stability operations. From 1900 to 1901, the Army provided public security for a sector of Peking, China of around 50,000 inhabitants. The Army conducted UO and, in the course of the operation, the 9th US Infantry suffered 20-percent casualties while fighting in Tientsin. Punitive expeditions to places such as Siberia, Cuba, Philippines, Central America, and Mexico put the Army in various urban situations that required using military power, notably, the occupation and security of Vera Cruz, Mexico in 1914. In the context of these smaller-scale contingencies (SSCs), UO became a staple of US Army employment.

1-14. World War II forced the Army to grapple with the issues of large-scale urban combat almost immediately. In his 1941 defense of the Philippines, General MacArthur examined how to defend Manila. Manila represented a large, modern, friendly urban area, which was the capital city of a close US

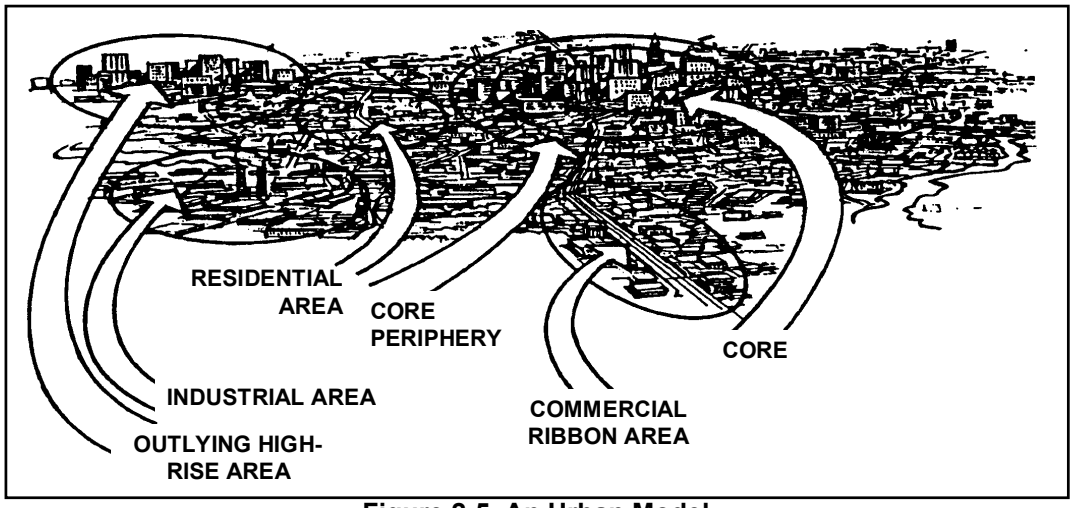

Figure 2-5. An Urban Model

2-28. This analysis helps to determine, in general terms, potential advantages and disadvantages each portion of the urban area may have toward accomplishing the urban operation. However, construction materials and methods can vary drastically. Commanders identify specific building types and construction and understand weapons effects on them. If a commander desires precise effects, the chosen munitions or weapons system must be sufficiently accurate, capable of penetrating the target structure (without exiting the other side), and achieve effects within. Often noncombatants, critical infrastructure, or protected targets are in the vicinity. Commanders may need to determine if the surrounding walls or structures will sufficiently absorb or negate the blast or thermal effects of the weapon. Regardless, understanding the structure of buildings in the urban AO allows commanders to determine the best means to accomplish the mission.

Core

2-29. The core is the heart of the urban area, the downtown or central business district. Relatively small and compact, it contains a large percentage of the urban area's shops, offices, and public institutions. Often, it houses the headquarters for commercial and financial activities and contains important cultural, historical, and governmental buildings. These activities prefer the core because of its accessibility. As the focal point of the transportation network, residents find the core the easiest part of the urban area to reach. It normally has the densest concentration of multistory buildings and subterranean features (underground parking garages, underground shopping centers, and basements).

2-30. High-rise buildings, varying greatly in height (possibly 50 stories above ground and four stories below ground), make up the cores of today's urban areas. Buildings routinely abut one another, with little or no setback from the sidewalks. Building height and density (except in outlying high-rise areas) often decreases from the core to the edge of the residential areas, while the amount of open areas frequently increases. Modern urban planning allows for more open spaces between buildings than found in the cores of older urban

areas. Most core areas have undergone constant redevelopment resulting in various types of construction. Commonly, brick buildings abound in the oldest part of the core; framed, heavy-clad structures in the next oldest part; and a concentration of framed, light-clad buildings in the newest part. The outer edge of the core, the core periphery, has ordinarily undergone less change than the core resulting in buildings of uniform height (commonly two to three stories in towns and five to ten stories in larger urban areas).

2-31. Generally, offensive operations focused in core areas (even when effectively isolated) will require greater resources—particularly manpower, time, and information—than in many other parts of the urban area. Mounted maneuver often proves more difficult in core areas because of fewer open areas, buildings closer to the streets, and more civilian vehicles. Rubbled buildings in central core areas (especially high-rise buildings) become greater obstacles to mobility as they can collapse on and easily block thoroughfares. Rubble piles can afford excellent covered and concealed positions for dismounted threat forces. Consequently, commanders use more dismounted forces as part of their combined arms operations. Conversely, the core may be critical to urban defensive operations, particularly older areas of heavier construction that afford greater protection. Despite potential difficulties, the core area may be key to accomplishing many stability or support missions since it houses much of the human activity that occurs in the urban area.

Industrial Area

2-32. Industrial areas often develop on the outskirts of the urban areas where commercial transportation is easiest (along airfields and major sea, river, rail, and highway routes). These areas will likely displace farther from the core and residential areas as urban planners recognize the potential threat of TIM. The dispersed pattern of the buildings provides sufficient space for large cargoes, trucks, and materiel handling equipment. These areas may provide ideal sites for logistic bases and maintenance sites. While older, heavier-clad structures may be found, new construction consists of low, large, flat-roofed factory and warehouse buildings with large parking areas and work yards. These structures generally have steel frame and lightweight exterior walls. Multistory structures usually have reinforced concrete floors and ceilings.

2-33. Toxic industrial chemicals and other TIM may be transported through an urban area (by rail, barge, truck, or pipeline) or found stored throughout. However, larger concentrations will exist in industrial areas, and their presence should concern Army forces operating near them.

2-34. Each year, over 70,000 different chemicals are produced, processed, or consumed globally. An estimated 25,000 commercial facilities around the world produce, process, or store chemicals that have a legitimate industrial use yet are also classified as chemical warfare agents. Many other chemicals (not classified as weapons) may still be sufficiently hazardous to pose a considerable threat to Army forces and civilians in urban areas as choking agents or asphyxiates, flammables or incendiaries, water contaminants, low-grade blister or nerve agents, or debilitating irritants. These chemicals can be released either accidentally or deliberately. On 2 December 1984, nearly 40 tons of methylisocyanate used to produce pesticides leaked from a storage

tank at Bhopal, India, killing thousands and injuring hundreds of thousands. Figure 2-6 contains a small sampling of other toxic industrial chemicals along with their industrial or commercial usage that commanders may encounter in an urban area. The most common chemicals that pose a risk to Army forces are highly toxic irritant gases such as ammonia, chlorine, hydrogen chloride, and sulfur dioxide.

Toxic Industrial Chemical	Industrial/Commercial Uses
Ammonia	Commercial Refrigerant, Fertilizer and Food Production, Petroleum, Explosives, Other Chemicals
Arsine	Semiconductor Industry
Boron Trichloride	Organic Catalyst, Soldering Magnesium
Boron Trifluoride	Chemical Catalyst, Aluminum Refining
Carbon Disulfide	Industrial Solvent, Dry-Cleaning, Agriculture, Petroleum, Electroplating
Chlorine	Potable Water, Disinfectants, Metal Treatment, Plastics & Rubber
Diborane	Plastics and Rubber
Ethylene Oxide	Industrial Alcohols, Fumigant, Industrial Sterilant
Fluorine	Uranium Processing, Rocket Fuel
Formaldehyde	Plastics, Fertilizers, Preservative/ Corrosion Inhibitor, Fungicide and Germicide, Pesticide, Pharmaceuticals
Fuming Nitric Acid	Fertilizers, Explosives, Metal Processing, Pesticides, Rocket Fuel
Hydrogen Bromide	Chemical Industry, Pharmaceuticals
Hydrogen Chloride	Fabrics, Semiconductors
Hydrogen Cyanide	Pesticides, Other Chemicals, Pharmaceuticals, Electroplating
Hydrogen Fluoride	Glass Production, Chemical Catalyst
Hydrogen Sulfide	Metallurgy, Agricultural Disinfectant
Phosgene	Dyes, Pharmaceuticals, Herbicides & Insecticides
Phosphorus Trichloride	Metallurgy, Pesticides and Germicides, Gasoline Additive
Sulfur Dioxide	Paper, Food Processing, Ice Production, Disinfectant, Leather Processing
Sulfuric Acid	Fertilizers, Petroleum, Iron and Steel Production, Battery Electrolyte
Tungsten	Electronics, Other Chemicals

Figure 2-6. Toxic Industrial Chemicals and Their Industrial or Commercial Uses

2-35. Standard chemical defense equipment may not protect against (and chemical detection devices may fail to detect) many toxic industrial chemicals. Therefore, the risk to soldiers operating near the chemicals may increase. Commanders vigilantly identify these potential hazards, carefully consider them as part of their overall vulnerability analysis, factor the analysis into their risk assessment, and execute necessary contamination avoidance measures. Any assessment includes the chance that toxic industrial chemicals may be deliberately released by a threat to gain advantage or accidentally released by friendly actions (see FM 3-21 and FM 3-14).

Outlying High-Rise Area

2-36. High-rise areas consist of multistoried apartments, commercial offices, and businesses separated by large open areas, such as parking lots, parks, and individual one-story buildings. High-rise buildings are framed, light-clad construction with thin walls of brick, lightweight concrete, or glass. The automobile, mass transit systems, and improved road networks encourage these areas to grow and function further from the urban core.

2-37. Similar to the urban core, units given the mission to clear these areas, or even portions therein, will need more resources—most notably personnel and time—to accomplish their mission. Commanders should consider courses of action that isolate these entire areas, multiple sections within these areas, or even individual buildings before assigning tasks. The tasks could rapidly drain a unit's resources or unhinge other portions of the major operation. When defending, commanders who can integrate these areas in the defense will present the attacker with similar resource problems and may be appropriate in a defense to delay. However, defending commanders ensure that the defense is arranged so that this portion cannot be easily isolated and bypassed. Defensive positions in structures may require extensive reinforcement due to light-clad construction.

Residential Area

2-38. Residential areas can be found dispersed throughout the urban area; however, large suburban areas (or sprawl) normally form on the outskirts. Residential areas often consist of row houses or single-family dwellings set in a grid or ringed pattern in a planned development project. Yards, gardens, trees, and fences usually separate the buildings in a residential area. Modern residential construction is often of light-clad, framed wood construction, or brick. The combined population of surrounding suburban areas often far outnumbers that of the urban area proper. Specific suburbs tend toward homogeneity based on ethnicity, religion, economics, or some other social aspect. Commanders locate and analyze these areas to determine their impact on operations—often the most critical importance is the people located there (see the subsequent discussion in this chapter on the urban society).

2-39. In offensive and defensive operations, commanders determine whether operations pose an unacceptable physical risk to civilians. If so, they may have to relocate civilians to a safer area, perhaps another residential area. If not, commanders may implement a "stay-put" policy for that area and attempt to isolate the effects of the operation from them. During support operations, residential locations may be the initial focal point for operations since most of the permanent population is located there.

2-40. This area also contains a relatively recent urban phenomenon known as *shantytowns*. These areas are commonly on unoccupied, low-value land in and around many urban areas in underdeveloped countries. Shantytowns may contain over 50 percent of the total urban population. They usually lack streets and public utilities. The lean-to structures tend to be irregularly laid out, connected by walking paths, and made of any scrap material available: lumber, brick, sheet metal, cardboard, cloth, or vegetation. The random arrangement of structures, the absence of formal street naming and numbering, and often the lack of easily identifiable buildings and terrain create challenges. These challenges include navigating, coordinating, and transmitting accurate information and intelligence. Depending on the operation, the temporary nature of the structures can also mean that mobility can be either more or less restricted than other sections of the urban area. A military force may easily knock down and traverse structures without affecting mobility at all. However, their destruction may cause unacceptable civilian casualties, in which case mobility becomes more restrictive as the narrow paths often do

not accommodate vehicular traffic. Similarly, the makeshift materials inhibit weapons effects less than many other parts of the urban area built more solidly. A tank round, for example, may go much farther and injure many more noncombatants than in an area where the primary building material is stone. Regardless, commanders consider the effects of their operations in this area, to include vehicles and weapons, as the weak structures increase the risk of fratricide, civilian casualties, and large, rapidly spreading fires.

Commercial Ribbon Area

2-41. Commercial ribbon areas are rows of stores, shops, and restaurants built along both sides of major streets that run through and between urban areas. These same types of areas often develop along the roads that connect one urban area to another (strip areas). The buildings uniformly stand two to three stories tall (about one story taller than the dwellings on the streets behind them).

URBAN SOCIETY

2-42. Although intricate, understanding the urban terrain is relatively straightforward in comparison to comprehending the multifaceted nature of urban society. UO often require Army forces to operate in close proximity to a high density of civilians. Even evacuated areas can have a stay-behind population in the tens of thousands. This population's presence, attitudes, actions, communications with the media, and needs may affect the conduct of operations. Homogeneity decreases drastically as the size of the urban area increases. Commanders take into account the characteristics of a population whose beliefs and interests vary based on factors. Figure 2-7 lists the factors. Civilian populations continually influence, to varying degrees, operations conducted in an urban area. Thoroughly understanding these societal aspects and avoiding "mirror-imaging"—overlaying one's own values and thought processes on top of the person or group one is trying to assess—will help to accurately anticipate civilian actions and response.

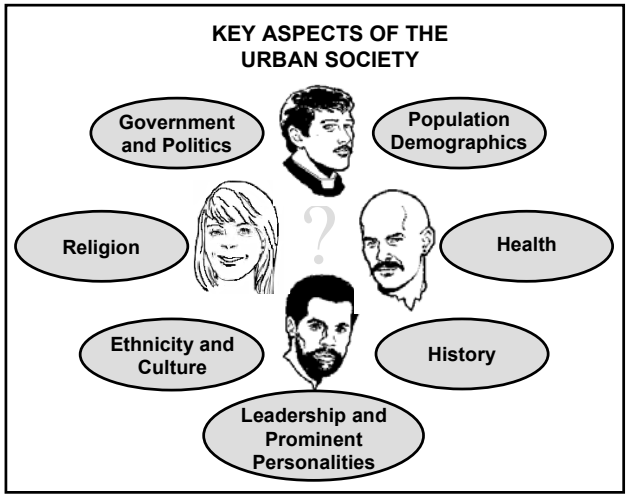

Figure 2-7. Key Aspects of the Urban Society

POTENTIAL CENTER OF GRAVITY

2-43. A COG during an urban operation, particularly in stability operations and support operations, may be the civilian inhabitants themselves—specifically their behavior. However, supportive behavior is generally an advantage in any type of operation. Correspondingly, neutral behavior toward friendly

infrastructure system individually and in relation to others to determine an appropriate course of action toward it.

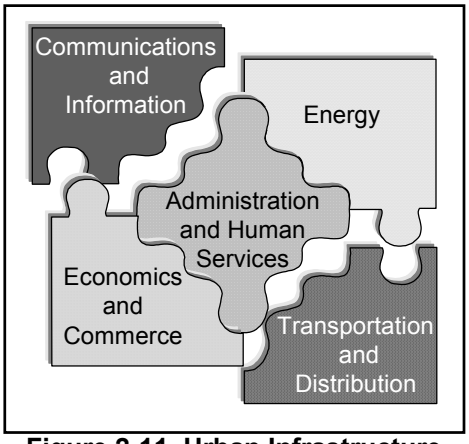

Figure 2-11. Urban Infrastructure

STRUCTURES AND PEOPLE

2-58. As depicted in Figure 2-1, each element of the infrastructure consists of both a terrain (physical) and human component. For example, the physical component of the electrical segment of the energy infrastructure consists of power stations, substations, a distribution network of lines and wires, and necessary vehicles and repair supplies and equipment. The human component of this same segment consists of the supervisors, engineers, linemen, and electricians who operate the system. Commanders understand and recognize the physical and human components in their assessments.

IMPACT ON FUTURE OPERATIONS

2-59. Destroying or incapacitating of any of these elements may impact future operations and inhabitants of the urban area. Destroying urban infrastructure during initial phases of an operation may require commanders to assume responsibility for repair, maintenance and clean up, and operation of those same facilities later. Although exceptions will exist, commanders cannot destroy or significantly damage the infrastructure of a foreign urban center during operations and expect the population to remain friendly to US or allied forces. Still, support from the urban society (albeit of increased importance in UO) is only one factor that commanders weigh while developing appropriate courses of action.

RESOURCE INTENSIVE

2-60. Requirements to protect, restore, or maintain critical infrastructure may divert substantial amounts of resources and manpower needed elsewhere and place additional constraints on subordinate commanders. Civilian infrastructure is often more difficult to secure and defend than military infrastructure. The potentially large and sprawling nature of many systems (such as water, power, transportation, communications, and government) make their protection a challenge. Yet, the infrastructure of an urban area can provide commanders with essential logistics and combat service support. Therefore, the initial expenditure of time and other resources may be necessary to support concurrent or future operations. Legal considerations, however, may affect using the infrastructure and acquiring the urban area's goods and services. Commanders, their staffs, and subordinates (often down to the individual soldier) know their limits concerning Army authority to commandeer civilian supplies or equipment to facilitate mission accomplishment (see the legal support discussion in Chapter 9). In stability operations and support operations, the safeguard or restoration of critical urban infrastructure for military or civilian use may be a decisive point in the overall operation.

COMMUNICATIONS AND INFORMATION

2-61. This system is comprised of the facilities and means to transmit information from place to place. It includes—

- Telecommunications, such as telephones (to include wireless), telegraphs, radios, televisions, and computers.
- Police, fire, and rescue communications systems.
- The postal system.
- Newspapers, magazines, and other forms of print media.
- The human interaction that conveys information.

Perhaps more than any other element of the infrastructure, communications and information link all the other elements in an interdependent "system of systems."

2-62. Urban communications and information systems can serve as an alternate for both friendly and threat forces and can be easily secured with civilian, off-the-shelf technologies. Threats may make use of commercial systems intertwined with legitimate civilian users, making it unpalatable to prevent use of these assets. Forces can also use these systems to influence public opinion, gain intelligence information, support deception efforts, or otherwise support IO.

Increasing Impact of Computers

2-63. In many urban areas, computers link other elements of the urban infrastructure. They link functions and systems in the urban area and connect the area to other parts of the world. This latter aspect creates important implications for commanders of a major operation. Operations involving this cybernetic function may produce undesirable effects on a greater scale than initially intended. For example, commanders may be able to close or obstruct an urban area's banking system; however, this system may impact the international monetary exchange with unwanted or even unknown effects. The authority to conduct these types of IO will often be retained at the strategic level.

> *Whoever coined the phrase 'The Theatre of Operations' was very prescient. We are conducting operations now as though we are on a stage, in an amphitheatre, or Roman arena; there are at least two producers and directors working in opposition to each other, the players, each with their own idea of the script, are more often than not mixed up with the stage hands, ticket collectors and ice cream vendors, while a factional audience, its attention focused on that part of the auditorium where it is noisiest, views and gains an understanding of events by peering down the drinking straws of their soft drink packs.*
>
> General Sir Rupert Smith
> Deputy Supreme Allied Commander Europe

Pervasive Media

2-64. The media is central to the communications and information infrastructure and a critical operational concern. Compared to other operational environments (jungles, deserts, mountains, and cold weather areas), it has more access to urban operations. This is due largely to airports, sea- and river

ports, and major road networks; ready access to power sources and telecommunications facilities; as well as access to existing local media structures. Hence, media presence may be pervasive and IO even more critical to success in UO than operations in many other environments.

2-65. **A Complex Relationship.** A complex relationship exists among information, the public, and policy formulation. Although the *degree and manner* in which public opinion shapes government policy are uncertain, negative visual images of military operations presented by the media can change political objectives and, subsequently, military objectives. As important, media reporting can influence civilian activity in an urban AO to either the advantage or disadvantage of the commander.

2-66. **Induce Cooperation Through Credibility.** Commanders do not control the media; however, they monitor the flow of information that the news media receives and subsequently reports. Consequently, commanders plan and execute PA operations that will induce cooperation between the media and Army forces. Successful relations between urban Army forces and the news media evolve from regular interaction based on credibility and trust. More information is usually better than less, except when the release of such information may jeopardize security and the success of the operations and threaten the safety of soldiers. However, commanders cannot simply withhold information to protect the command from embarrassment. They consider media interests as part of the normal planning process and work to ensure that information presented to the news media is accurate, timely, and consistent with operations security. Since the media will likely arrive in the urban area before the conduct of operations, early deployment of PA assets may be critical. Commanders synchronize PA activities with CMO and PSYOP. Such action eliminates duplicated effort and ensures a unity of purpose consistent with the IO concept of support (see Chapter 4 for more details involving IO and PA during UO).

2-67. Failure to provide sufficient information can hamper a commander's ability to conduct the mission. Poor relationships with the media can result in inaccurate and even biased reporting. Such reporting can cause a public reaction that influences the ability to achieve operational objectives. During the Russian 1994-95 battle against Chechen separatists in Grozny, for example, the Russian military refused to communicate with reporters. The media reported primarily from the perspective of the Chechen rebels. This encouraged both local and international support for the rebels. It also allowed the Chechens, who lacked sophisticated information systems, to use the media to broadcast operational guidance to their forces. (During their second Chechnya campaign of 1999-2000, Russia learned this lesson well and the Russian view of the war dominated domestic public opinion.) On the other hand, successfully engaging the media can serve as a force multiplier. The Army's open and responsive interaction with the media during peacekeeping operations in Bosnian urban areas helped to explain the challenges and successes of Army forces in the Balkans to the public. This helped maintain domestic, international, and local political support for NATO operations and, with a successful command information program, helped maintain soldiers' morale.

TRANSPORTATION AND DISTRIBUTION

2-68. This element of the infrastructure consists of—

- Cableways and tramways.
- Networked highways and railways to include bridges, subways and tunnels, underpasses and overpasses, ferries, and fords.
- Ports, harbors, and inland waterways.
- Airports, seaplane stations, and heliports.
- Mass transit.
- Trucking companies and delivery services that facilitate the movement of supplies, equipment, and people.

Similar to communications and information, this facet provides the physical link to all other elements of the infrastructure.

2-69. Army forces deploying into a theater of operations depend on ports and airfields; seizure of these assets may impact the projection of combat power. Once in theater, transportation and distribution systems in the urban area can contribute greatly to the movement of forces, maneuver, and logistic operations throughout the entire AO. Control of decisive points in this infrastructure may be important to the military operation and to the normal functioning of the urban area (and surrounding rural areas). Supplies traveling through the transportation and distribution system may be military-specific supplies (such as ammunition and repair parts) and supplies for both the military and urban population (such as food, medicine, oil, and gas). The system may also support the movement of military forces and the urban area's population (for which it was designed). Therefore, commanders of a major operation may have to develop innovative methods that limit the transit of threat supplies and reinforcements while facilitating the movement of their own resources and those of civilians'. This last consideration attempts to minimize hardship and promote normalcy in the urban area and will increase in significance as the need for legitimacy increases.

2-70. Most urban areas (particularly in developing countries) have two forms of transportation systems that exist simultaneously: a *formal* system and an *informal* or paratransit system. Large organizations, bureaucracy, imported technology, scheduled services, and fixed fares or rates characterize formal systems. Low barriers to entry; family and individual entrepreneur organizations; adapted technology; flexible routes, destinations, and times of service; and negotiated prices characterize the informal system. The informal system is more decentralized and covers a much greater portion of the urban area than the formal system. The informal transportation and distribution system often includes a waterborne element, is more likely to function through turbulence and conflict, and can extend hundreds of kilometers beyond the urban area. Accordingly, commanders assess both systems to establish effective movement control.

ENERGY

2-71. The energy system provides the power to run the urban area. It consists of the industries and facilities that produce, store, and distribute electricity, coal, oil, and natural gas. This area also encompasses alternate energy sources, such as nuclear, solar, hydroelectric, and geothermal power.

2-72. Sources of energy may be tens or hundreds of miles away from the urban area itself. Therefore, commanders may exert control without applying combat power directly to the urban area itself by controlling or destroying the source (power generation or refinement plant) or the method of distribution (pipe- or power lines). With electrical energy that cannot be stored in any sizable amount, the latter may be the best means as most major urban areas receive this energy from more than one source in a network of power grids. However, control may be as simple as securing a power station or plant and turning off switches or removing a vital component that could later be restored. On the other hand, lengthy pipe- and power lines may compound security and protection of this element of the infrastructure.

2-73. The number of nations that have invested in nuclear power and nuclear research is increasing. With this increase, the potential for Army forces to operate in urban areas that include (or are near) these facilities also increases. Damage to one of these facilities and potential radiation hazards will present special challenges to commanders of a major operation. To safeguard friendly forces and civilians, commanders will need to employ a blend of peacetime and tactical nuclear contamination avoidance principles (see FM 3-14).

ECONOMICS AND COMMERCE

2-74. This system encompasses—

- Business and financial centers to include stores, shops, restaurants, hotels, marketplaces, banks, trading centers, and business offices.
- Outlying industrial and agricultural features to include strip malls, farms, food storage centers, manufacturing plants, and mills.

The latter elements also consist of the production and storage of toxic industrial chemicals used in agriculture (insecticides, herbicides, and fertilizers), manufacturing, cleaning, and research (to include biological agents). (See concerns of TIM previously discussed under Industrial Areas.) Recreational facilities such as amusement parks, golf courses, and stadiums are also part of this element of the infrastructure. In their overall assessment of this area of the infrastructure, commanders consider the activities and influence of criminal organizations or elements.

2-75. A critical aspect of this area during operations may be the political sensitivity of US or allied industries investing and operating in a foreign country, particularly during stability operations and support operations. An enemy or a disgruntled civilian population may attack or disrupt commercial activities as a political statement against the US or our allies. Food production facilities also may assist commanders in Army food services and may be of critical concern during relief operations.

ADMINISTRATION AND HUMAN SERVICES

2-76. This broad system covers urban administrative organizations concerned with urban area's public health, safety, and welfare. It also includes many organizations and structures that provide the urban populace with its social identity. Together, it encompasses—

- Governmental services that include embassies and diplomatic organizations.
- Activities that manage vital records, such as birth certificates and deeds.
- The judicial system.
- Welfare systems.
- Schools and universities.
- Religious organizations and their churches and shrines.
- Historic monuments and other cultural resources.
- Hospitals and other medical services.
- Water supply systems.
- Waste and hazardous material storage and processing facilities.
- Emergency services, such as police, fire, and rescue.

2-77. Losing many of these services often has an immediate, destabilizing, and life-threatening impact on the inhabitants of the urban area. In stability operations and support operations, numerous administrative and human services often rise to critical importance before all other elements. However, restoration of these services is often a lengthy civil-military operation.

Seeing the Urban Area and Its Parts

The summer of 1944 confronted German General Dietrich von Choltitz with a dilemma. As military commander of greater Paris, he was to eliminate French Resistance internal to the city while defending against approaching Allied units, missions for which he had insufficient forces. Choltitz's situation was further complicated by Hitler's demand that he destroy the city, an action the general saw as needlessly destructive (and infeasible given his scant resources). Choltitz's seniors directed the preparation, and later the destruction, of Paris's 45 Seine River bridges. They were the only remaining crossing points over that waterway given Allied bombing of others outside the French capital. Premature destruction would trap German forces defending to their north, a second-order effect that Choltitz used to justify his disobedience of orders demanding the bridges' demolition.

The German general also recognized that some mission-critical elements were part of Paris's social rather than physical infrastructure: the leadership of the various resistance groups and the relationships between them. Choltitz understood that he lacked resources to defeat the many separate factions; he therefore chose the unorthodox (asymmetric) approach of accepting an intermediary's offer of a truce with these groups. Such an agreement provided some measure of the stability needed while Choltitz awaited promised reinforcements. Further, he realized that the resistance factions were by no means united in their goals. Communist elements sought a much different end than those looking toward a de Gaulle-led postwar government. A truce thus set the French Communists (who sought an uprising so as to legitimize their claims to power) against others trying to buy time until Allied forces arrived, forces that included Free French units supportive of de Gaulle.

Although his defense of the capital failed, Choltitz succeeded in harboring his available resources, reducing the effectiveness of the resistance organizations fighting his soldiers, and maintaining withdrawal routes for units north of the Seine. The German commander's analysis in support of these efforts was effective in part because of his insightful (1) identification of critical points that included elements of terrain, citizenry, and infrastructure; (2) understanding of the relationships between these parts; and (3) use of an asymmetric approach to address his lack of sufficient force to otherwise handle the densities that challenged him.

THREAT OPERATIONAL PRINCIPLES

3-5. The threat may apply several key operational principles to oppose Army forces operating in an urban environment (see Figure 3-1). These principles focus more on how a threat might fight in an urban area rather than specifically whom the threat might be or in what region of the world the conflict might occur. They are more effective in an urban environment due to—

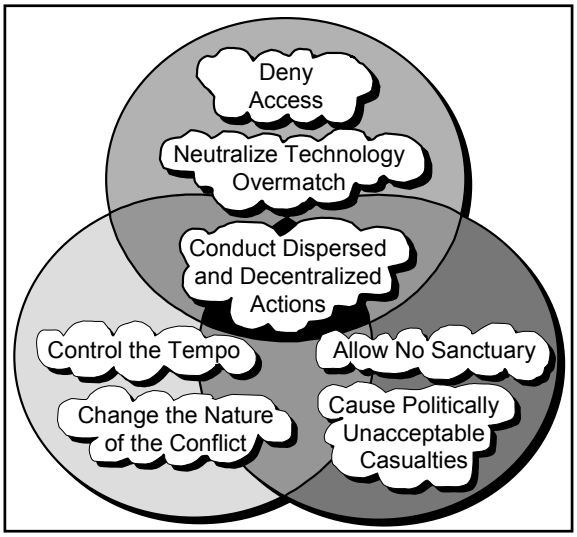

Figure 3-1. Threat Operational Principles

- The high costs in time, material, and manpower involved in UO.
- The limiting effects of urban areas on many technological advantages.
- The proximity of airfields and ports to urban areas.
- The potential moral dilemmas created by exposing numerous civilians to harm or injury.

These principles complement and overlap each other; however, at their core is the need to defeat an enemy of superior numbers, technology, or both.

DENY ACCESS

3-6. The Army may not be located where future conflicts are fought. Thus, the Army maintains the ability to rapidly project and sustain combat power over long distances and time spans. This capability demands that Army forces quickly gain and maintain control of seaports or aerial ports of embarkation or debarkation, particularly where the density of US basing and en route infrastructure is low. Commanders gain control of these ports by unopposed (assisted or unassisted) or forcible entry operations. In either case, these phased-entry operations may present potential vulnerabilities, particularly—

- Unsuitable composition of initial or early entry forces lacking necessary combat power for immediate decisive operations.
- Initial command and control difficulties and an immature situational understanding.
- Lack of developed theater support.

3-7. Consequently, threats may attack during initial force projection operations to oppose, disrupt, or prevent the build-up of essential combat power into a theater of operations. These attacks may occur anywhere deploying Army forces are located, at overseas bases, at home stations, and even in military communities. Increasingly, deployment facilities such as airfields and ports exist as integral components of urban areas. Threats will invariably use the complex and concealing nature of these urban areas, coupled with the vulnerabilities, to create favorable conditions for their attacks.

NEUTRALIZE TECHNOLOGY OVERMATCH

3-8. Threats will always strive to force engagements at a time and place most advantageous to them. They may locate military forces and vital military capabilities in urban areas to achieve sanctuary from the effects of Army capabilities and make Army forces and systems more vulnerable to less-sophisticated weapons.

3-9. The clutter of the physical structures, electromagnetic radiation, and population diminishes Army capabilities. This clutter makes it difficult for Army forces to acquire and effectively engage targets at long ranges. In urban areas, the terrain often allows a threat to operate in closer proximity to friendly forces. Therefore, the threat may "hug" friendly forces to avoid the effects of high-firepower standoff weapon systems and degrade their ability to gain or maintain a thorough common operational picture. Additionally, this threat tactic attempts to inhibit friendly commanders from employing some weapon systems and munitions for fear of fratricide.

CONTROL THE TEMPO

3-10. Threats will try to achieve a decisive advantage by setting and controlling the tempo necessary to achieve their objectives. To prevent the Army's entry into theater, threats may try to create a high operational tempo to take advantage of the inherent weaknesses in power projection operations outlined earlier. As other efforts deny entry, threats may seize the initiative, achieve surprise, and exploit the tempo differential by attacking with heavy conventional forces potentially possessing greater firepower and more rapid ground mobility than the Army's initial-entry forces.

3-11. If they cannot deny entry or end the conflict quickly, threats may use any preparations made in the initial high-tempo period to prolong the event, aiming to degrade US or allied commitment. The complex nature of the urban environment slows operations conducted in and around these areas. Threats may maximize this characteristic by fighting for key urban complexes and infrastructure, forcing friendly forces to operate within these areas. If Army operations focus on one or more urban areas, the overall campaign slows. However, even when UO make up only one component of a much larger campaign, they may consume valuable resources needed for other operations and delay the entire campaign.

Tempo

The battle for Aachen, Germany, in the fall of 1944, developed during the US First Army's offensive to breach the Westwall fortifications. Aachen, the ancient capital of Charlemagne, had symbolic political and psychological significance for the Germans and Americans. Furthermore, it was the first city on German soil to face an assault by the Allies. Consequently, the symbolic importance of this first major battle in Germany ensured bitter resistance against American attackers. The Germans surrendered only after the city was destroyed. Expected to take a few days, instead, the battle took weeks. Although the Army had achieved a clear tactical victory, the German defense of Aachen cost the First Army valuable time and resources, and delayed the planned attack to the Rhine River.

CHANGE THE NATURE OF THE CONFLICT

3-12. Threats may attempt to change the fundamental nature of the urban conflict to exploit ambiguous or tenuous political-military objectives. Many nations gain and maintain domestic popular support to use their armies for political objectives. The threat may attempt to change the nature of the conflict by modifying its strategy and tactics, the environment, or any combination, ultimately hoping to reduce friendly popular support. For example, introducing an urban terrorist threat to US civilians or soldiers not directly engaged in operations changes the nature of the conflict. This type of threat may not have been an initial consideration, and this change may reverse public support for the operation. Another example, growing US coalition combat power may cause the threat to switch from open maneuver warfare to UO to avoid decisive combat with superior forces and achieve a stalemate. Originally expecting a quick solution or victory, the political leadership may now envision a longer deployment with less chance of lasting success.

CAUSE POLITICALLY UNACCEPTABLE CASUALTIES

3-13. Threat forces may gain an advantage against superior friendly forces by capitalizing on a perceived weakness of many Western nations: the inability to endure continuous losses or casualties for other than vital national interests or losses for which they are psychologically unprepared. A secondary US interest may equate to national survival on the part of a threat. Therefore, the threat (particularly with fanatical leadership) may willingly sacrifice excessive amounts of money, equipment, and people (soldiers and civilians) to achieve victory. Threats may attempt to weaken US resolve and national will to sustain the deployment or conflict by inflicting highly visible, embarrassing, and if possible, large losses on Army forces, even at the cost of similar losses to themselves. Many threat forces will use UO to inflict mass casualties and destroy premier Army weapon and information systems. The physical characteristics of the urban environment support these ambush techniques. Light infantry or insurgents with readily obtainable, hand-held antiarmor weapons can effectively attack armored vehicles and helicopters, no matter how sophisticated, in an urban area.

ALLOW NO SANCTUARY

3-14. Threats will attempt to deny Army forces safe haven anytime and anywhere. Terrorism may be one of the tactics used to deny sanctuary to Army forces. They will attack Army forces anywhere, particularly while operating in urban areas where the fear from being attacked from any quarter is often greater. Threats may be or employ state-sponsored or independent terrorists, well equipped and motivated to accomplish their assigned missions.

3-15. Military buildings, facilities, and installations in urban areas are particularly vulnerable to high-yield explosive munitions as well as other clever means to create large explosions. The close-in nature of urban areas, large populations, and high volume of vehicle traffic provide a good environment for target reconnaissance, explosives positioning (conventional or high-yield), and cover for an attack. These attacks will likely be preceded by extensive, careful reconnaissance, necessitating a solid friendly counterterrorism and counterintelligence effort.

CONDUCT DISPERSED AND DECENTRALIZED OPERATIONS

3-16. To a certain extent, dispersed and decentralized operations are an integral part of all threat principles. However, this concept warrants separate emphasis as a principle since threat forces will likely place great significance on it on future urban battlefields. Both dispersed and decentralized approaches seek to reduce threat vulnerabilities to air power and precision-guided munitions (PGM) while increasing their agility, flexibility, and overall maneuverability in an urban environment.

3-17. Urban terrain tends to fragment and separate forces that operate in it. Threat forces recognize this characteristic, accept it, and make it work to their advantage. They conduct operations from dispersed urban locations to reduce their vulnerability to friendly decisive operations and massed firepower. Although separated, threat forces will attempt to retain the ability to assemble and mass quickly so to strike as opportunities present themselves. Once threat forces complete the operation, they will return to separate locations to avoid potential counterattack. The fluidity and seemingly disjointed appearance of these threat UO will challenge friendly efforts to conduct templating and pattern analysis. Ambushes (air and ground) will be used to deny friendly ground and air reconnaissance of their dispersed locations.

3-18. Dispersed operations normally depend on good command and control to achieve synchronization and massed effects. Threat forces also understand the debilitating effects of the urban terrain on communications and the execution of operations. When they cannot mass their forces or effects, they will depend on decentralized operations to achieve their objectives. They will operate autonomously, guided only by a higher authority's purpose and intent. These operations make them even less vulnerable to massed attacks and PGM as smaller threat forces do not present an objective or target that will allow friendly decisive operations. Again, pattern analysis and templating will be extremely difficult. Using this principle often prolongs the conflict but is central to implementing the other threat principles.

URBAN THREAT TACTICS

3-19. Urban areas provide a casualty-producing and stress-inducing environment ideally suited for using specific urban threat tactics. Moreover, urban areas provide threats with an unmatched degree of cover and concealment from friendly information and firepower systems. While active urban threats may vary widely, many techniques will be common to all. Figure 3-2 outlines a set of threat tactics available to potential threats opposing mission accomplishment in urban areas. *Army forces may use many of the threat tactics, except those that violate the law, ethics, and morals, to defeat urban threats.* Moreover, using asymmetric means is not the sole domain of the threat. Army commanders can also leverage capabilities, create conditions, and plan operations to develop asymmetric advantages to accomplish the mission.

USE THE POPULATION TO ADVANTAGE

3-20. Many urban areas may be too large to evacuate completely (if at all). Even if desirable, a military force may have no place to safeguard and secure the inhabitants. Therefore, future UO may see large segment of the populace

remain. Offensive and defensive operations may be constrained not only by the terrain and by the presence of many civilians. Army forces involved in urban stability operations and support operations will certainly conduct missions in and amongst the residents. These residents may restrict operations and, when gathered in large numbers, may (even without initial hostile intent) present a critical force protection issue for the commander.

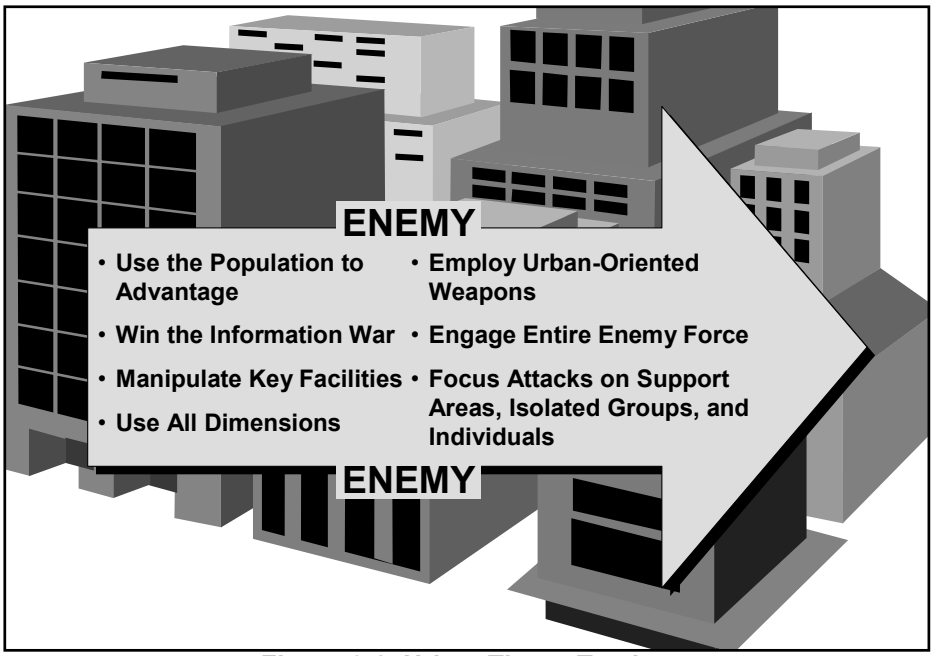
ENEMY
• Use the Population to Advantage
• Win the Information War
• Manipulate Key Facilities
• Use All Dimensions
• Employ Urban-Oriented Weapons
• Engage Entire Enemy Force
• Focus Attacks on Support Areas, Isolated Groups, and Individuals
ENEMY

Figure 3-2. Urban Threat Tactics

Use as Key Terrain and Concealment

3-21. From the threat standpoint, the populace is similar to key terrain: the side that manages it best has an advantage. Threat forces may gain this advantage by using civilians as camouflage, concealment, and a means of deception. Guerrilla and terrorist elements may look no different from any other member of the community. Many foreign conventional and paramilitary troops often have a "civilian" look. Western military forces originally adopted the clean-shaven and close-cut hair standards to combat disease and infection, but future opponents may not adhere to those standards. They may adopt grooming standards, civilian-looking clothing, and other "nonmilitary" characteristics to make themselves indistinguishable from the civilians.

> *Chechen fighters sometimes disguised themselves as Red Cross workers, donning the identifying armbands. They also passed themselves off as civilians and offered to guide Russian forces through the city, instead leading them into ambushes.*
>
> Olga Oliker
> *Russia's Chechen Wars 1994-2000*

Identifying Soldiers from Civilians

During Russia's 1994-95 conflict with Chechnya, Russian forces had difficulty identifying Chechen guerrilla forces from Grozny's noncombatant population. Because their appearance was identical to that of the urban populace, Chechen soldiers could freely walk around the city, suddenly disappear, and then abruptly reappear firing their weapons from basements, windows, or dark alleyways. To distinguish fighters from peaceful city dwellers, Russian forces began looking at men's shoulders to see if they were bruised (from firing weapons) and their forearms to see if there was burned hair or flesh (from the extraction of cartridges). They closely examined their clothing and smelled for gunpowder residue. To identify a Chechen artilleryman, Russian soldiers checked for glossy spots left by artillery and mortar rounds on the bends and cuffs of sleeves. They also turned pockets inside out to check for a shiny, silvery-leaden hue indicating the former presence of small arms ammunition. Russian forces also recognized a grenade launcher operator or mortar man from fibers and crumpled pieces of gun cotton on their clothing. US Army commanders may need to develop similar, imaginative means to identify the threat.

Gain Cover, Protection, and Increased Mobility

3-22. Threat forces may attempt to gain cover by using the urban inhabitants as human shields. With this increase in protection, they simultaneously increase their mobility. They recognize the Army's focus on developing and applying rules of engagement (ROE). They will take advantage of the restraining effects of international law and the Army ethical values to enhance their mobility in proximity to friendly positions. Knowing the Army's reluctance to cause noncombatant casualties and collateral damage, threats may operate in areas containing civilians and essential facilities to restrict the Army's use of massed or nonprecision firepower. They may also employ "rent-a-crowds"—civilians paid to demonstrate against military forces—armed only with sticks, stones, and Molotov cocktails (a potential asymmetric challenge).

Make Moral Responsibilities a Weakness

3-23. Depending on their successes, threats may use these tactics and skillful information operations that attack national will and coalition sensitivities in an attempt to force the Army to establish more restrictive ROE. Threat forces may also take advantage of the Army's moral responsibilities. By herding refugees into friendly controlled areas, threat forces try to make the civilians a burden on the Army's logistic and security resources. Threat forces, on the other hand, may not abide by international agreements, such as the Geneva conventions. They may not take prisoners unless they can be ransomed or made part of a local prisoner exchange. They may even execute friendly prisoners in front of the media to show their "strength" and, more importantly, to cause friendly forces to overreact and lose their legitimacy. Threat forces can then use such an overreaction to unite others with their cause.

Acquire Intelligence and Logistic Support

3-24. Indigenous threat forces can normally use the local population for intelligence and logistic support far more effectively than can an alien army.

Threat forces may manipulate local hires serving among US soldiers, such as those contracted by the Army for base operation purposes or translator duties. In addition, refugees moving through friendly controlled sectors may provide the threat with information on friendly dispositions, readiness, and intent. Even friendly residents may become unwitting or unwilling informants, providing an enemy or a hostile with vital information on friendly activities, dispositions, and capabilities. However, a threat employing particularly cruel, abusive, or repressive measures may easily turn certain groups in the urban area against them, even when they share a common history, culture, and ethnicity with the civilians. This is more likely in those areas with high population densities.

3-25. Threat forces may also seek to use some nongovernmental organizations (NGOs). They may try to obtain relief supplies either through the organizations' legitimate relief operations or as a target for theft. Some organizations may even be fronts for weapons, food, ammunition, money, and fighters. For example, during Russia's second conflict in Chechnya (1999-2000), documents purportedly found in Grozny by the Russians listed nations such as Sudan, Nigeria, Niger, and Ivory Coast as sending fighters to Chechnya under the guise of the International Islamic Relief Organization. (Chechen fighters also disguised themselves as Red Cross workers.) This deception increases the need for strict security and force protection measures, close coordination with NGOs operating in urban areas, and closer monitoring of suspect organizations' activities by civil affairs personnel.

WIN THE INFORMATION WAR

3-26. Threat forces will try to win the information war as much as they will directly oppose Army UO. Threat urban campaigns need not be tactical military successes. They need only to weaken legitimacy and make the opposition's campaign appear unpalatable to domestic and world support. As a critical part of their overall information operations, threats will use the ever-present media to tell their story. Portable video cameras, commercial radios, and cellular telephones, available and easily concealed, will be as important to many threat actors as weapons and ammunition. Internet access, already firmly established in many urban areas, provides the means to easily disseminate threat propaganda, misinformation, and disinformation through web sites and electronic mail. Hackers, covered and concealed in the interior spaces of the urban area, may gain access to US sites to manipulate information to the threat's advantage.

Information and the Media

The media coverage of the urban battle for Hue, South Vietnam, although only one of hundreds of different attacks of the Tet Offensive, affected the will of both the American people and their political leadership. On January 31, 1968, two North Vietnamese Army (NVA)/Vietcong (VC) regiments and two sapper battalions, moving rapidly and with the element of surprise, attacked and seized part of the walled city (Citadel) of Hue. It was the third largest city in South Vietnam, the former capital of a united Vietnam, the capital of Thua Thien province, and a spiritual and cultural center. Initially intending to hold the city for

seven days, the NVA/VC retained portions of the city for approximately three weeks against determined US and South Vietnamese attempts to retake it.

Hue marked a revolution in the coverage of war by modern media. It was the first time Americans could sit at home and watch an ongoing battle on the evening news. One of the most intense and savage battles of the Vietnam conflict, it was televised every evening for almost a month. Although the battle for Hue was a tactical victory for the US, the North Vietnamese clearly achieved strategic success by searing the American consciousness with the high costs of urban warfare. Had US leaders made winning the information war a central part of the overall campaign plan—for example, exposing the American people to the NVA's brutality by publicizing the civilian executions in Hue—civilian support for the war may have been bolstered and a different outcome achieved. See Chapter 6 for a more detailed account of the battle for Hue.

MANIPULATE KEY FACILITIES

3-27. Threat forces will attempt to identify and quickly seize control of critical components of the urban area to help shape the battlespace. Urban telephone exchanges, for example, provide simple and reliable communications that can be easily secured with off-the-shelf technologies. Sewage treatment plants and flood control machinery can be used to implement WMD strategies or to make sections of the urban area uninhabitable. Media stations significantly improve the information operations abilities of the controlling force. Power generation and transmission sites provide means to control significant aspects of civilian society over a large area.

USE ALL DIMENSIONS

3-28. Threats will think and operate throughout the depth, breadth, and height (including supersurface and subsurface areas) of the urban environment. Conventional lateral boundaries will often not apply as threat forces control some stories of the same building while friendly forces control others.

3-29. Intrasurface areas and roofs provide urban threats with excellent observation points and battle positions above the maximum elevation of many weapons. Shots from upper floors strike armored vehicles in vulnerable points. Basements and other subsurface areas also provide firing points below many weapons' minimum depressions and strike at another weakness in most armor. Sewers and subways may provide covered and concealed access throughout the area of operations.

EMPLOY URBAN-ORIENTED WEAPONS

3-30. Whether purpose-built or adapted, many weapons are more useful in an urban environment while others may have significant disadvantages. Urban threat weapons are much like the nature of urbanization and the urban environment: inventive and varied. Many threats will integrate widely available off-the-shelf technologies into their weapon systems and armed forces. However, sniper rifles and small, man-portable, fire-and-forget weapons and demolitions and other improvised explosive devices will likely dominate the urban environment. Figure 3-3 lists examples of threat weapons favored in UO.

ENGAGE ENTIRE ENEMY FORCE

3-31. Threats may attempt to keep all or significant portions of Army forces engaged in continuous operations to increase their susceptibility to stress-induced illnesses. UO, by their nature, produce an inordinate number of combat-stress casualties. Continuous operations exacerbate this problem. Threat forces that employ this tactic will often maintain a large reserve to minimize the psychological impacts on their own forces.

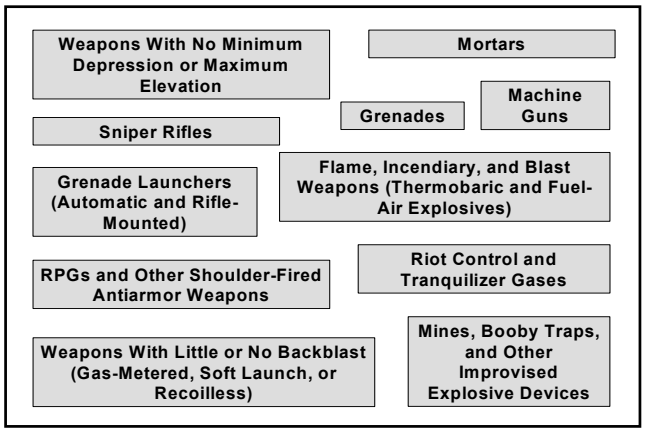
Weapons With No Minimum Depression or Maximum Elevation
Mortars
Machine Guns
Grenades
Sniper Rifles
Grenade Launchers (Automatic and Rifle-Mounted)
Flame, Incendiary, and Blast Weapons (Thermobaric and Fuel-Air Explosives)
Riot Control and Tranquilizer Gases
RPGs and Other Shoulder-Fired Antiarmor Weapons
Mines, Booby Traps, and Other Improvised Explosive Devices
Weapons With Little or No Backblast (Gas-Metered, Soft Launch, or Recoilless)

Figure 3-3. Favored Threat Weapons

3-32. To accomplish this, threat UO will likely involve decentralized maneuver, precision fires, and simultaneous operations involving unconventional and special purpose forces. Threat forces will take advantage of any exposed weakness and engage in battles as opportunities present themselves.

FOCUS ATTACKS ON SUPPORT AREAS, ISOLATED GROUPS, AND INDIVIDUALS

3-33. To supplement the previous tactic, threat forces will seek to target support areas, small groups, leaders and their headquarters, and individual soldiers. Their focus on resupply, casualty evacuation, and other sustainment activities, coupled with the compartmented terrain, navigational challenges, and multiple three-dimensional avenues of approach often makes these locations and soldiers more susceptible to surprise raids and ambushes. Attacks on these areas and groups are conducted to erode the Army's ability to sustain UO, to inflict maximum casualties, and to induce psychological stress. These attacks can be mitigated by careful, regular evaluation of choke points and other restrictive terrain, regular awareness training for units and individuals operating in or transiting through potential incident-prone areas, and thorough after-action analysis of incidents.

NEGATIVE EFFECTS OF URBANIZATION

3-34. Many urban areas are the engines for increased industrialism and economic growth as an expanding population provides the labor for manufacturing and service needs. However, rapid and inadequately planned growth can result in undesirable consequences. Uncontrolled urbanization may result in an infrastructure and economic base unable to support the growing population. A large transient, ill-housed, and idle population in a close geographic space may produce strife. Classes, cultures, ethnic groups, and races that might otherwise peacefully coexist can clash under the stress of survival. Uncontrolled urban growth has resulted in the negative effects listed in Figure 3-4 on page 3-12. *In many urban stability operations and support operations, these may be the primary "threats" to mission accomplishment.*

applying precision fires when appropriate and after considering the risks of compromise of the position or platform.

4-59. **Flexibility.** The urban ISR effort is more flexible than in other operations. This flexibility permits the ISR effort to meet unforeseen circumstances and to deal with the challenges of the urban environment. As indicated previously, the urban environment is particularly difficult to penetrate. The practical effects of this characteristic are that—

- The initial ISR effort may not be as successful as in other operations.
- More intelligence requirements may be discovered later while executing ISR operations than otherwise.
- The threat may be more successful in active counterreconnaissance because of the concealment advantages of the urban environment (hiding in structures as well as among the urban population).

Therefore, tactical and operational commanders consider requesting greater than usual ISR support from higher headquarters. Higher headquarters is proactive in augmenting units conducting urban operations with additional ISR assets. Additionally, ISR assets remaining under the control of the higher headquarters respond more quickly to the CCIR of supported commanders. Sequencing reconnaissance missions over time provides flexibility by creating uncommitted reconnaissance assets.

4-60. Time sequencing of ISR assets is essential to flexibility. It makes ISR assets more survivable and allows the intelligence cycle to mature the CCIR. It also creates a ready ISR capability to augment committed forces in critical areas if required or diverts them around centers of threat resistance. If not required, it executes original tasks as envisioned in planning. Cueing allows a high-value ISR asset to be capable to respond to multiple targets based on an ongoing assessment of the overall reconnaissance effort and the changing CCIR. Redundancy permits the effort to overcome line of sight restrictions, the destruction of an ISR asset, and the ability to combine ISR resources to create combat power if required. Maximizing the ISR effort requires applying all available ISR assets to support the urban operation. Additionally, assets—such as air defense artillery and field artillery radars and engineer squads—are integrated into the ISR effort. In urban operations, units will also commit infantry and armor elements (plus their organic reconnaissance elements) into the tactical reconnaissance effort. These units increase the dismount capability and the ability of reconnaissance elements to fight for information and fight through security zones.

INFORMATION OPERATIONS

4-61. Information operations are an integral part of all Army operations and a critical component in creating and maintaining information superiority. The information environment is the sum of individuals, organizations, or systems that collect, process, and disseminate information; it also includes the information itself. In UO, the information environment is extremely dense due to the proliferation of INFOSYS and widespread access to those systems. In urban operations, commanders consider how the urban environment, particularly the human component, uniquely relates to executing IO.

4-62. IO are executed using core and supporting elements and related activities (see Figure 4-4 and FM 100-6). The elements of IO are employed in either an offensive or defensive role. Many elements of IO are not affected differently in an urban environment from any other environment. The following sections outline some IO considerations unique to urban operations.

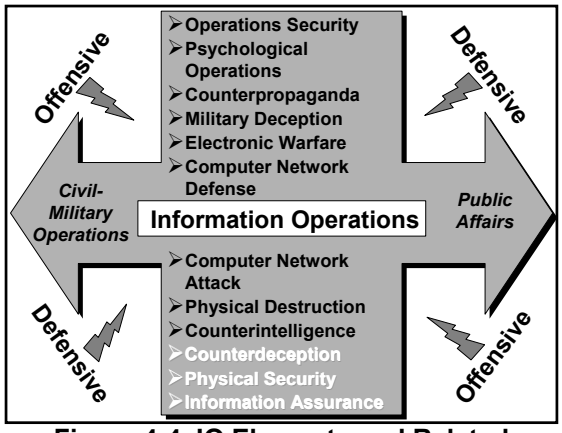

Figure 4-4. IO Elements and Related Activities

Operations Security

4-63. In the urban environment, Army forces can leverage existing urban infrastructure, including the communications and information infrastructure, to enhance Army operations. The danger in integrating these systems is violating OPSEC. Commands ensure that Army forces use only approved systems and proper safeguards exist. Commands also supervise subordinate units for inadvertent breaches of OPSEC policies when using existing urban systems.

4-64. The close proximity of the Army operations to a civil population, particularly in stability operations and support operations, makes Army activities themselves an OPSEC concern. Hostiles or other threats integrated into the urban population may have more chances to observe Army activities closely. Such observations can provide insight into tactics, techniques, and procedures (TTP) and expose operational vulnerabilities. However, threats may coerce even friendly civilians to provide a threat EEFI, and are supplemented with military deception efforts. Commanders in an urban environment ensure that civilians cannot observe critical TTP. Any observable patterns and TTP vary and are supplemented with deception efforts. Physical security is increasingly important in urban areas to control civilians' access. Although many urban operations require close coordination with NGOs, commanders screen information provided to them to protect EEFI. Release of EEFI to NGOs is controlled and done with full recognition and understanding of potential consequences—the benefits must far outweigh the risks involved.

Psychological Operations

4-65. PSYOP aim to influence the behavior and attitude of foreign audiences, both military and noncombatant, in the urban environment. PSYOP are a force multiplier and contribute in many ways to mission success (see FM 33-1-1). Their ability to influence the attitudes and disposition of the urban population cannot be overstated. While the complexity of the societal component of the urban environment can make PSYOP challenging, it also offers many options and resources. Potentially, PSYOP (with other political and economic actions) may help limit or preclude the use of military force in urban areas. In some circumstances, military operations may be relevant only in terms of their psychological effect.

4-66. The positive influence created by PSYOP is often essential to developing an effective HUMINT capability particularly in an urban area where many civilians actively or passively support the threat. Persuading and influencing a few to support friendly forces may pay great dividends. These few supporters may allow Army forces to penetrate the urban area and obtain essential information. Such information can apply to threat capabilities, threat intentions, and even the urban environment itself.

4-67. PSYOP, combined with other elements of offensive IO, aid in isolation of a threat—a critical shaping action for any urban operation. For example, commanders may use PSYOP to inform civilians about new food distribution points located away from urban combat operations. This action supports the UO fundamental of separating combatants from noncombatants and helps to further isolate the threat (both physically and psychologically) from the civilian populace. Aside from projecting a positive image of friendly forces over threat forces, PSYOP also isolates the threat. These operations identify and exploit ethnic, cultural, religious, and economic differences between the elements of the civilian populace and threat forces as well as the differences among supportive and unsupportive civilian factions. The complexity of the urban environment enables quick changes in opinion or attitude. Commanders continually evaluate the results of PSYOP for mission relevance.

Counterpropaganda

4-68. Because propaganda is aimed at both combatants and noncombatants, UO are especially concerned with its use. Propaganda can rapidly and dramatically affect the attitudes of the urban population and will probably occur after urban operations have begun. Thus, it can create situations in the human dimension of the environment quite different from those discovered in the pre-operations assessment. Counterpropaganda is, therefore, essential to urban operations. To negate, deflect, or destroy the threat's propaganda capability, counterpropaganda requires—

- Monitoring the threat's propaganda efforts.
- Evaluating the effectiveness of those efforts.
- Determining methods using all Army force capabilities, especially PSYOP and PA units.

Military Deception

4-69. Urban operations present numerous challenges to tactical commanders; however, higher-level commanders may help to mitigate some challenges. Commanders can use military deception efforts designed to mislead threat decisionmakers as to friendly force disposition, capabilities, vulnerabilities, and intentions. Military deception actions may allow commanders to achieve tactical surprise or improve relative combat power at a selected location. For example, allowing the threat to observe certain activities on a selected avenue of approach may cause the threat to shift his forces (and effort) to the area perceived to be threatened. (This movement may also aid in determining the overall disposition of threat forces and intentions.) Repositioned forces or effort to activities or locations that are not decisive to the achievement of friendly objectives, combined with other IO designed to overwhelm his information and intelligence systems, may create the force and tempo

differential necessary to achieve success. Commanders tailor urban deception plans to the specific urban area, paying close attention to the societal characteristics of the target population.

Electronic Warfare

4-70. Electronic warfare (EW) includes all actions that use electromagnetic or directed energy weapons to control the electromagnetic spectrum or to attack a threat. Conducting EW in urban areas seeks to achieve much the same results as in other environments. A major consideration in urban areas is collateral effects on portions of the urban infrastructure that rely on the electromagnetic spectrum for service. Thus, precision is a major factor in planning for EW operations. For example, EW attacking a threat's television broadcasts avoids affecting the television broadcasts of neutral or friendly television. Likewise, EW attacking military communications in a large urban area avoids adversely affecting the area's police and other emergency service communications. Urban offensive and defensive operations will have the least restrictions on EW operations while urban stability operations and support operations may have significant constraints on using EW capabilities.

Computer Network Operations

4-71. Computer network operations (CNO) include computer network attack (CNA), computer network defense (CND), and computer network exploitation (CNE). CNO are not applicable to units at corps and below. Echelons above corps (EAC) units will conduct CNA and CNE. If tactical units require either of these network support, they will request it of EAC units.

4-72. **Computer Network Defense.** In urban operations, CND will require extreme measures to protect and defend the computers and networks from disruption, denial, degradation, or destruction. The nature of the urban environment and configuration of computer networks provides the threat with many opportunities to interdict local area networks (LANs) unless monitored by military forces. LANs controlled by military forces are normally more secure than the civilian infrastructure. Commanders prepare for opportunities by the threat to insert misinformation.

4-73. **Computer Network Attack.** Considerations regarding the execution of CNA in urban operations are similar to those of EW: CNAs that do not discriminate can disrupt vital civilian systems. However, possible adverse effects on the civilian infrastructure can be much larger—potentially on a global scale. In the short term, CNAs may serve to enhance immediate combat operations but have a debilitating effect on the efficiency of follow-on urban stability operations. Because of these far-reaching effects, tactical units do not execute CNA. CNA is requested of EAC units. EAC units will receive all requests from lower echelons, carefully consider second- and third-order effects of CNA, and work to ensure its precise application.

4-74. **Computer Network Exploitation.** CNE is an enabling operation and intelligence collection to gather data from target or adversary automated INFOSYS or networks. Tactical units do not have the capability for CNE. CNE contributes to intelligence collection at EAC. In UO, CNE will be centrally controlled.

Information Assurance

4-75. Information assurance in UO takes on an added dimension. As with other operations, availability of information means timely, reliable access to data and services by authorized users. In UO, the timeliness of information may be restricted because structures block the transmission waves. The need for retransmission facilities will overwhelm the signal community. The reliability can be questioned because of the blockage between units and communications nodes. Unauthorized users may intercept the communications and input misinformation or disinformation. Commanders protect the integrity of all information from unauthorized changes, including destruction. INFOSYS with integrity operate correctly, consistently, and accurately. The authentication of information may be accomplished by sophisticated electronic means. However, it is more likely that communications-electronics operating instructions authentication tables will authenticate the information. Commanders consider the confidential nature of all information in UO. The G6 protects the information from unauthorized disclosure. Information being passed cannot be repudiated. The density of the infrastructure in urban areas may inhibit receipt by the intended individual or unit. The sender may have no means to determine if the message was received.

Counterdeception

4-76. In UO, threat forces can easily accomplish deception operations. The force that controls the area above and below ground will have freedom of movement. Deception aimed at friendly commanders will cause them to deploy combat power at the wrong place and the wrong time. Counterdeception by friendly commanders will identify and exploit threat attempts to mislead friendly forces. Counterdeception is difficult. Cultures of certain rhetoric and actions are more predisposed to deception than others. Knowing a threat's previous deception methods is important. Dismissing tactical indicators because they conflict with preconceptions may allow a hostile deception operation that plays on the preconception to succeed.

Physical Destruction

4-77. Physical destruction includes those actions—including direct and indirect fires from air, land, sea, space, and Special Forces—taken with, to augment, or supplement IO actions. Like many other IO elements, major concerns with employing physical destruction in UO are precision and follow-on effects. Thus, commanders using physical destruction to support IO adhere to the same constraints as all other fires.

Counterintelligence

4-78. Counterintelligence (CI) in the context of IO focuses on detecting threats against INFOSYS. The urban environment, particularly in stability operations and support operations, is ideal for espionage, other intelligence activities, sabotage, or assassination. Threats can approach, conduct reconnaissance, and escape under the concealment of the urban terrain and population.

Civil-Military Operations

4-79. Civil-military operations (CMO) are a critical aspect of virtually every urban operation and are included here as a closely related activity of IO. CMO activities enhance the relationship between military forces, civilian authorities, and the urban population. They promote the development of favorable emotions, attitudes, or behavior. CMO range from support to combat operations to assisting in establishing political, economic, and social stability. Chapter 9 has a more detailed discussion of CMO and CA units. However, because of its criticality to UO, CMO and its effects are thoroughly integrated throughout this manual.

Public Affairs

> *Four hostile newspapers are more to be feared than a thousand bayonets.*
>
> Napoleon Bonaparte

4-80. Another related activity to IO is public affairs (PA). PA influences urban operations by transmitting information through the media to internal (in urban Army forces as well as in the urban civilian populace) and external audiences. At higher levels of command, PA can help maintain popular national support for the urban operation by clarifying the links between strategic goals and operational objectives. At both the operational and tactical levels, it links Army units, the urban inhabitants, the US and international public, and the media. PA can help determine potential media issues that may influence planned UO. It can also aid commanders in assessing the impact of UO on the environment (particularly its citizens) and other agencies and organizations operating in the urban area. PA also helps to counter rumors, uncertainty, fear, loneliness, confusion, and other factors that cause stress (to both soldiers and civilians) and undermine effective UO. If the populace does not understand the mission, false expectations may be created that Army forces may not be able to meet. PA can help prepare the American public for the possibility of high casualty rates. Overall, PA supports urban commanders in their goals to achieve information superiority and preserve public support.

4-81. PA does not distort, direct, or manipulate information. Its effectiveness stems directly from establishing and maintaining credibility with the urban population and media. Commanders synchronize PA with the integral elements of IO (particularly PSYOP and counterpropaganda) to ensure that all Army sources send only one message. Urban commanders plan for the media and integrate PA into their decisionmaking and (through IO) targeting processes.

4-82. The density of information sources and reporters in UO ensures that all Army activities will be subject to media and public scrutiny. Many reporters will congregate in cities for their own comfort and take advantage of established communications networks. Urban areas are densely populated and, together with Army forces and NGOs operating there, will present the greatest number of human-interest stories. The local urban or host-nation media, however, will often have their own agendas developed over a longer period of time. This local media will also have a greater influence over the urban population than the international media. The indigenous media may not follow international norms. Commanders are responsible to understand

the media (particularly the local media), its role, and its potential influence. They cannot allow themselves to be intimidated by it. Commanders support open and independent reporting and grant access to their units as early and as far forward as the situation permits.

4-83. The PA principles listed in Figure 4-5 and addressed in FM 46-1 summarize PA. They serve as useful guides toward planning and executing PA operations regardless of the environment. However, the principles of "practice security at the source," and "truth is paramount" particularly apply to the urban environment. The compartmented nature of most UO impede commanders' and their PA officers' ability to be at all places where the media will likely be. Therefore, all soldiers are trained, provided with clear and understandable PA guidance, and prepared to communicate to the civilian media. The keys at all levels are understanding, prepared acceptance, and truthfulness tempered with an essential concern for OPSEC.

- Truth is Paramount
- If News is Out, It is Out
- Public Affairs Must be Deployed Early
- Not All News is Good News
- Practice Security at the Source
- Media are Not the Enemy
- Telling Our Story is Good for the Army
- Soldiers and Families Come First

Figure 4-5. Public Affairs Principles

INTEGRATION OF CONVENTIONAL AND SPECIAL OPERATIONS FORCES

4-84. One important Army and joint resource that commanders of a major operation can use to influence urban operations is SOF. Several types of these forces exist, each with unique and complementary capabilities. They can be extremely valuable in UO for their ability to execute discrete missions with a higher degree of precision than conventional forces, to provide information, and to enhance cultural understanding. However, the challenges of using SOF include command and control, integration, and coordination with conventional forces that will normally command, control, and conduct the bulk of UO tasks. The density and complexity of UO make close coordination and synchronization of conventional forces and SOF essential to mission success. The nature of the environment dictates that both forces will work in close proximity to each other; the separation in space and time between SOF and conventional forces will often be much less in urban areas than in other environments. Overall, the nature of the environment demands a synergistic combination of capabilities to achieve effects on the threat and mission success.

4-85. Successfully integrating SOF occurs with proper integration into, or coordination with, the command structure of the force conducting the UO. SOF within a theater (less PSYOP and CA) ordinarily fall under joint command and control. Therefore, the commander of the major operation responsible for an urban area, if he is not a JFC, will have to coordinate through the JFC to integrate SOF capabilities into the UO. Examples of critical coordination elements include boundaries, no-fire areas, coordination points, and requirements to support search and rescue contingencies.

4-86. A special operations command and control element (SOCCE) is usually formed at Army corps level, specifically to coordinate integrating the SOF with conventional forces. The SOCCE links conventional force commanders

CHARACTERISTICS OF URBAN OFFENSIVE OPERATIONS

6-2. All offensive operations contain the characteristics of surprise, concentration, tempo, and audacity (see FM 3-0). These characteristics also apply to urban offensive operations.

SURPRISE

6-3. Army forces can achieve offensive surprise at two levels: operational and tactical. In urban offensive operations, operational surprise can be decisive. The goal is to attack the urban area before the threat expects it, from a direction he doesn't expect, or in a manner he doesn't expect. In major operations, this requires an attack against an area that appears *to the threat* to be safe from attack. Urban areas that meet this criterion are not easily accessible. Army forces launch such an attack in different ways: through a vertical assault using airborne or air assault forces, through an amphibious assault, or through a penetration followed by a rapid and deep advance. All three attacks aim to achieve surprise and to deny the threat time to prepare and establish a defense. Surprise in a major urban operation prevents a threat from falling back to occupy prepared positions in and around an urban area.

6-4. At lower tactical levels, forces achieve surprise by attacking asymmetrically. An asymmetric method attacks the threat so he cannot respond effectively. This may be achieved by using special operations forces (SOF) against a threat prepared for a conventional attack, by attacking decisively with heavy forces when the threat expects an effort by light forces or SOF, or by leveraging Army forces' extensive information operations (IO) capability. Offensive IO—primarily using IO elements of deception, electronic warfare, and operations security (OPSEC)—can help achieve surprise at all levels (see Chapter 4). Attacking at night surprises the threat and maximizes the Army forces' training, command and control (C2), and technological advantages. Attacking from unexpected or multiple directions achieves surprise by leveraging Army information systems (INFOSYS) and superior synchronization of combat power and capabilities.

CONCENTRATION

6-5. In UO, the attacking force creates a major advantage by concentrating the effects of combat power at the point and time of its choosing. The area and its compartmented effects naturally disperse and dissipate combat capability. The environment also hinders repositioning forces rapidly. Such effects can work equally against defending and attacking forces. However, in a well-prepared defense, the defender often has the advantage of interior lines. The defender can reinforce or reposition forces more quickly using covered and concealed routes (such as, sewers, tunnels, or prepared holes made in walls). Successful UO need synchronized air and ground maneuver with overwhelming effects from fires at decisive points on the urban battlefield. To achieve proper synchronization and precise effects, commanders consider the unique time and distance relationships set by the environment.

TEMPO

6-6. Tempo is the rate of military action. Commanders understand that the tempo of urban operations differs from operations in more open terrain. The

complexity and the potential risk of the urban environment may invoke a cautious and methodical response on the part of commanders and their staffs. While preparing and planning urban operations, commanders conducting major operations that include urban areas strive to maintain an active tempo in offensive operations. Often, the primary purpose of the threat's urban defense is to disrupt the rapid tempo of Army offensive operations. The synchronized application of combat power and anticipation of threat reactions achieve tempo. The rapid tempo of events places Army forces in positions of advantage and helps achieve surprise. Controlling operational tempo and not allowing the different tempo of urban operations to adversely affect other operations is a challenge for commanders of major operations.

The Operational Context of Urban Operations Brittany Ports – August to September 1944

The plan for the invasion of Normandy, France, in June 1944 was meticulously developed. The plan not only addressed the invasion itself, but also contained detailed planning for the campaign to follow. A major concern of the detailed campaign planning was logistics. To address this critical concern, and specifically the problem of ports to supply the allied armies once ashore, the pre-invasion planning called for the major ports of the French province of Brittany—Brest, Lorient, and Saint Nazaire—to be objectives of General Patton's Third Army, once it was activated.

Early August 1944, almost two months after the successful Normandy invasion, the operational situation significantly differed from that envisioned by the D-Day planners. General Montgomery's Twenty-first Army Group was still fighting in the Bocage of Normandy. In contrast, General Bradley's Twelfth Army Group had just achieved a major breakthrough at Saint Lo, secured the Cotentin Peninsula, and reached the city of Avranches. Here was a decision point. Bradley and Eisenhower had to decide whether to adhere to the original plan and turn west with Patton's forces to secure the peninsula or to take advantage of the breakout at Saint Lo and turn east to exploit the disruption of the German defenses.

Ultimately they reached a compromise. General Middleton's VIII Corps was tasked to secure the peninsula, and the bulk of Patton's Army, three Army corps, was turned northeast to exploit the operational collapse of the main German defenses. See Figure 6-1 on page 6-4.

Middleton's corps sprinted into the peninsula with the 4th and 6th Armored Divisions leading the way. However, poor communications, disagreements between commands, and contradictory orders caused the corps to hesitate before pushing the two divisions to continue to exploit toward the ports. The result: the 6th Armored Division missed an opportunity to seize Brest against light resistance by one day. The 4th Armored Division, after capturing the smaller port of Vannes, was also frustrated on the approaches to Lorient. The American reaction to the inability to rapidly seize the ports demonstrated an understanding of changing circumstances. The 6th Armored Division turned the attack at Brest to the 8th Infantry Division and then relieved the 4th Armored Division at Lorient. The 4th Armored was moved to rejoin the rest of Third Army exploiting to the east and north. Ultimately Brest fell to VIII Corps on 19 September after a 43-day siege by three infantry divisions. The victory yielded 36,000 German prisoners of war

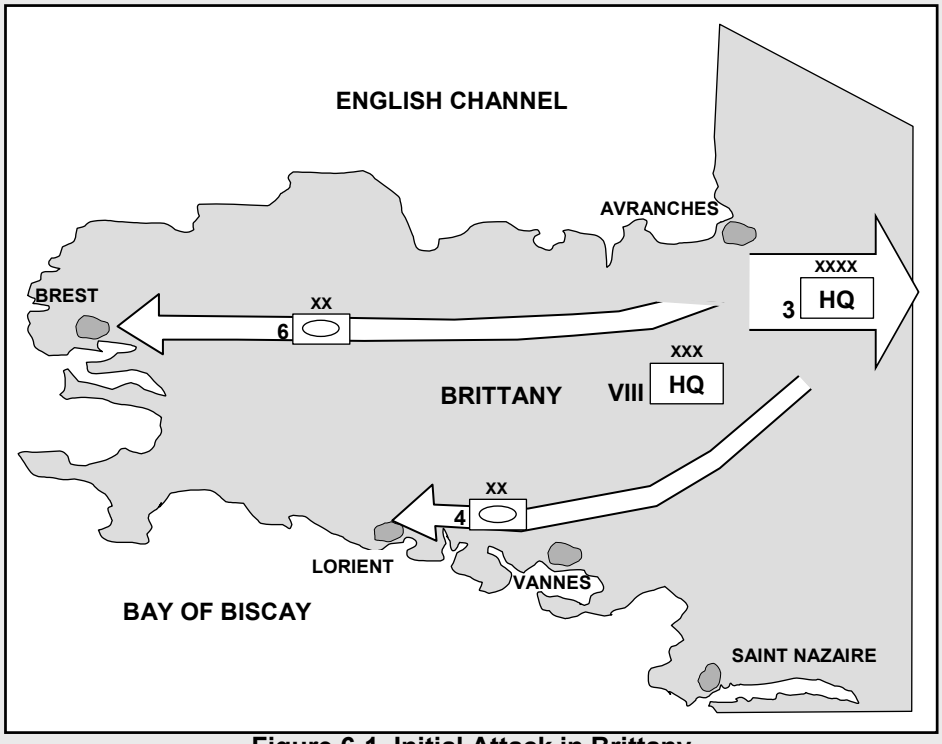

Figure 6-1. Initial Attack in Brittany

(POWs). However, the German defense and demolitions of the port left the port without an impact on the logistic situation of the allies. Brest cost the US Army almost 10,000 casualties and the commitment of significant supplies. The experience convinced commanders to surround and bypass the other major Brittany ports. Lorient and Saint Nazaire remained under German control, deep in allied territory, until the war ended ten months later (see Figure 6-2).

The operational lessons of the Brittany campaign are numerous. First, commanders are responsible to continually assess assumptions and decisions made during planning based on the changing circumstances of the battlefield. This includes the planning decision to conduct urban offensive operations. When the allies arrived at the Brittany Peninsula, the focus of the operational maneuver was no longer securing logistics facilities but exploiting the breakthrough at Saint Lo and the disintegrating the German defense. The bulk of Third Army then was turned to the north and east rather than west into the peninsula.

The Brest experience also demonstrates that the costs of urban offensive operations are continually assessed against the operational value of the objective. This lesson was applied to the cities of Lorient and Saint Nazaire. The cities were never seized from the Germans because their logistic value failed to warrant the required resources. German retention of the ports had no major adverse effect on the overall campaign.

Another lesson is that commanders cannot allow urban operations to disrupt the tempo of other offensive operations. One German goal of defending the ports was to disrupt the rapid tempo of the US exploitation. They failed to achieve this

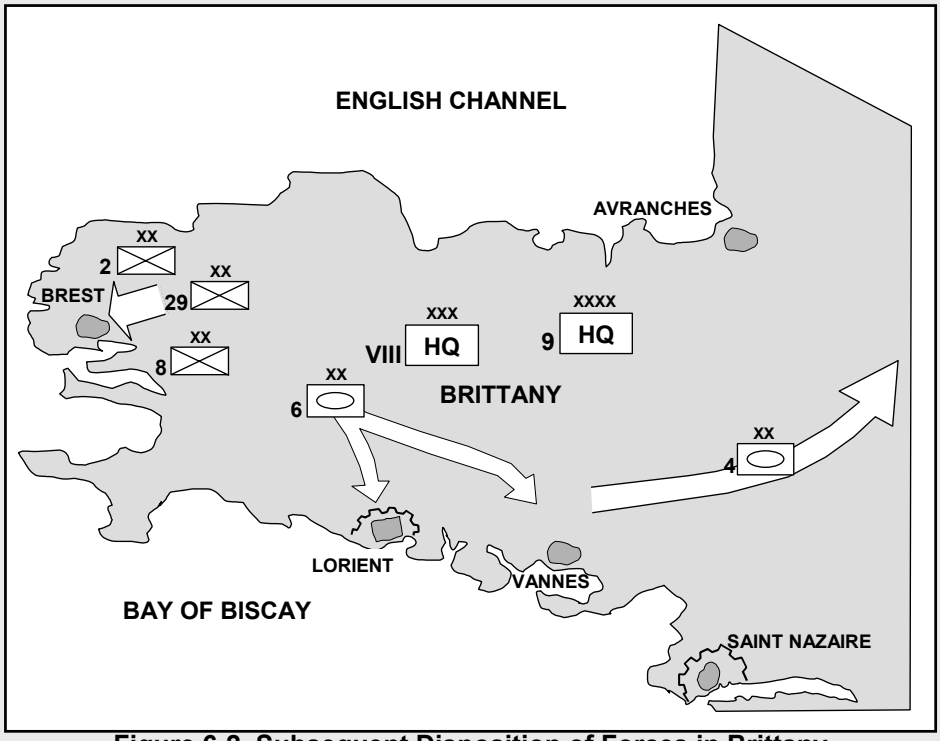

Figure 6-2. Subsequent Disposition of Forces in Brittany

goal because General Bradley continued the exploitation with the bulk of Third Army and executed the original plan with only a single corps.

Finally, commanders cannot allow emotion to color their decision to conduct or continue UO. The failure of 6th Armored Division to seize Brest rapidly caused some commanders to believe that Brest had to be captured because the prestige of the Army was committed to the battle. Costs of the continuing combat operations to seize Brest were significant. These resources might have been better committed elsewhere in the theater.

6-7. Tactical tempo is also important in urban combat. Because of the complex terrain, defending forces can rapidly occupy and defend from a position of strength. Once Army forces initiate tactical offensive operations, they cannot allow the threat to set the tempo of the operation. Instead, attacking forces seek to maintain a high tempo of operations. However, the tactical tempo of urban operations differs from operations in other terrain. Not necessarily slow, it requires a careful balance of preparation, speed, and security. In terms of unit fatigue, resource consumption, and contact with the threat, the tempo of most urban offensive operations may be rated as very high. On the other hand, in distances traveled and time consumed to achieve objectives, the tempo of many urban offensive operations might be rated as slow. The urban battlefield's density concentrates activity and consumes resources in a relatively small area. The lack of terrain seized or secured is not to be construed to mean a low tempo in the battle. In reality, the natural tempo of urban operations is not faster or slower than other types of operations,

merely different. A higher tempo of operations, however, can favor forces which are better led, trained, prepared, and resourced.

6-8. A high tactical tempo in urban offensive operations challenges logisticians to provide for the increased consumption of munitions and degrades soldiers' physical capabilities. Commanders anticipate these challenges and develop the means and abilities to overcome them. In the past, these challenges forced commanders to conduct urban offensives cyclically. They used night and other periods of limited visibility to resupply, rest, and refit forces. The environment influenced the tempo of their operations. This type of "battle rhythm" resulted in the forces spending each new day attacking a rested threat that was in a well-prepared position.

6-9. Army forces must maintain the tempo. Offensive operations continue even during darkness. Moreover, Army forces increase the tempo of operations at night to leverage the limited visibility capabilities, increased situational understanding, training, and INFOSYS that give an advantage to Army forces in all environments. To overcome the physical impact of the environment on soldiers, commanders retain a large reserve to rotate, continuing offensive operations at night. The force that fights in daylight becomes the reserve, rests, and conducts sustaining operations while another force fights at night. Army forces can then maintain the tempo of operations and leverage technological advantages in urban offensive combat.

6-10. Tempo in UO does not necessarily mean speed. Offensive operations balance speed, security, and adequate firepower. Commanders plan for the complex tactical environment and the requirements to secure flanks and airspace as the operation progresses. Mission orders allow subordinate units to make the most of tactical advantages and fleeting opportunities.

AUDACITY

6-11. Audacity is a simple plan of action, boldly executed. Superb execution and calculated risk exemplify it. In an urban attack, a thorough assessment of the physical terrain can mitigate risk. The terrain's complexity can be studied to reveal advantages to the attacker. Audacity can also be embodied in an operation by inventively integrating the direct action tasks of SOF throughout the operation. Combining SOF actions with conventional attacks can asymmetrically unhinge a defensive plan.

URBAN OFFENSIVE OPERATIONS AND BATTLEFIELD ORGANIZATION

6-12. Urban offensive operations, like all operations, are framed in the overall doctrinal framework of sustaining, shaping, and decisive operations. Each operation is essential to the success of an urban offensive, and usually two or more of these operations occur simultaneously. Sustaining operations in urban offensive operations ensure freedom of action. They occur throughout the area of operations (AO) and for the duration of the operation. Shaping operations in urban offensive operations create the conditions for decisive operations. In UO, much of the shaping effort focuses on isolation, which is critical in both major operations and tactical battles and engagements. Decisive operations are attacks that conclusively determine the outcome of UO.

adjusted for the conditions of the environment. Precision-capable artillery systems generally support urban operations better than rocket artillery.

6-24. Divisions entering urban combat may require additional resources. These resources include military intelligence support in the form of linguists, human intelligence (HUMINT) specialists, and unmanned aerial vehicles (UAVs). Engineering assets will be at a premium; the task organization of a task force executing the decisive operation may require a one-to-one ratio of engineer units to combat units. Corps and higher engineering support may be necessary to meet these requirements and to repair vital and specialized infrastructure. A tailored and dedicated corps support battalion or corps support group may need to assist in providing anticipated support to a displaced and stressed civil population. Finally, divisional CA units may require augmentation to deal with NGOs and civilian government issues.

6-25. Successfully conducting decisive operations in the urban environment requires properly synchronizing the application of all available combat power. Army forces have a major advantage in the command and control of operations. Commanders use this advantage to attack numerous decisive points simultaneously or in rapid succession. They also use it to attack each individual decisive point from as many directions and with as many different complementary capabilities as possible. Commanders completely understand urban environmental effects on the battle operating systems to envision and execute the bold and imaginative operations required. Significantly, these operations require that C2 systems account for the mitigating effects of the environment as execution occurs.

6-26. Properly synchronized actions considerably enhance the relative value of the combat power applied at the decisive points. They present to the threat more requirements than he has resources with which to respond. Synchronized IO and multiple maneuver actions paralyze the threat's decisionmaking capacity with information overload combined with attacks on his C2 systems. Additionally, well-synchronized actions limit the time the threat has to make decisions and forces him into bad decisions. In the urban environment, these effects are enhanced because C2 systems are already strained, poor decisions are harder to retrieve, and units that do not react are isolated and destroyed.

FORMS AND TYPES OF URBAN OFFENSE

6-27. Traditional forms of offensive maneuver include envelopment, turning movement, infiltration, penetration, and frontal attack. Traditional types of offensive operations are movement to contact, attack, exploitation, and pursuit. These traditional forms listed apply to urban combat. Some have greater application to an urban environment than others do. Moreover, success will belong to commanders who imaginatively combine and sequence these forms and types throughout the depth, breadth, and height of the urban battlefield. This is true at the lowest tactical level and in major operations.

FORMS OF OFFENSIVE MANEUVER

Envelopment

6-28. The envelopment is the ideal maneuver for isolating threat elements in the urban area or isolating the area itself. A deep envelopment effectively isolates the defending forces and sets the conditions for attacking the urban area from the flank or rear. Yet, enveloping an objective or threat force in the urban area is often harder since achieving speed of maneuver in the environment is so difficult (see Figure 6-3). Vertical envelopment, however, works effectively if Army fires can effectively suppress or neutralize the threat air defense.

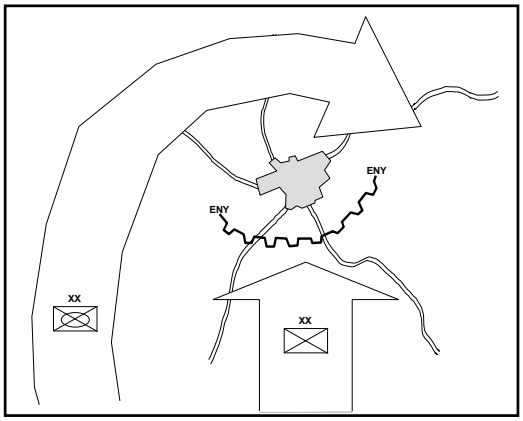

Figure 6-3. Envelopment Isolates an Urban Area

Turning Movement

6-29. Turning movements can also be extremely effective in major operations (see Figure 6-4). By controlling key LOCs into the urban area, Army forces can force the threat to abandon the urban area entirely. These movements may also force the threat to fight in the open to regain control of LOCs.

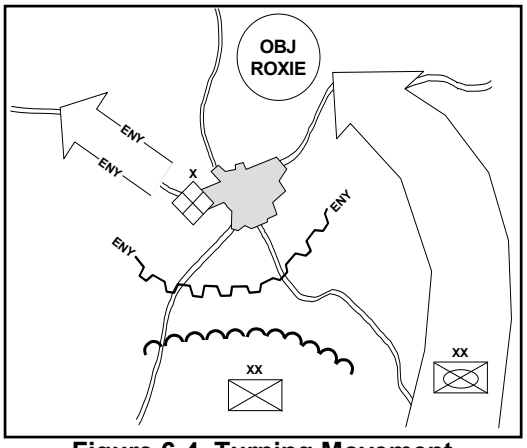

Figure 6-4. Turning Movement

Infiltration

6-30. Infiltration secures key objectives in the urban area while avoiding unnecessary combat with threat defensive forces on conditions favorable to them (see Figure 6-5). This technique seeks to avoid the threat's defense using stealthy, clandestine movement through all dimensions of the urban area to occupy positions of advantage in the threat's rear (or elsewhere). It depends on the careful selection of objectives that threaten the integrity of the threat's defense and superior COP. Well-planned and resourced deception operations may potentially play

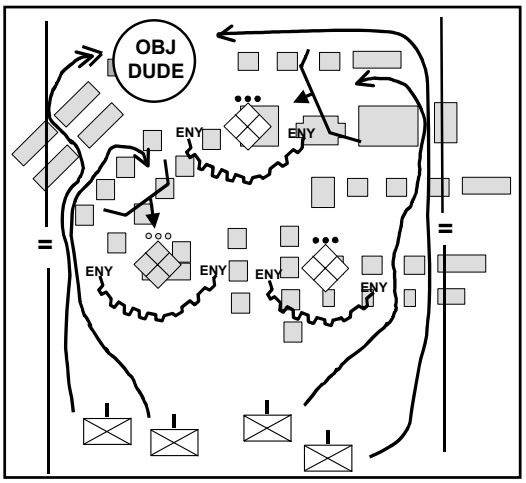

Figure 6-5. Infiltration

a critical role in masking the movement of infiltrating forces. The difficulty of infiltration attacks increases with the size and number of units involved. It is also more difficult when Army forces face a hostile civilian population. Under such circumstances, infiltration by conventional forces may be impossible. Armored forces are generally inappropriate for infiltration operations. However, they may infiltrate large urban areas if the threat is not established in strength and had insufficient time to prepare defenses.

Penetration

6-31. Penetration is the most useful form of attack against a prepared and comprehensive urban defense (see Figure 6-6). It focuses on successfully attacking a decisive point. Ideally in urban combat, multiple penetrations in all dimensions are focused at the same decisive point or on several decisive points simultaneously. In urban combat, the flanks of a penetration attack are secure, and resources are positioned to exploit the penetration once achieved.

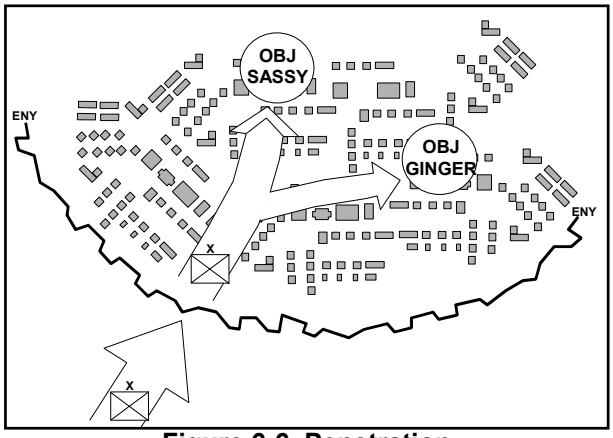

Figure 6-6. Penetration

Frontal Attack

6-32. Frontal attacks are the least favorable form of maneuver against an urban area (see Figure 6-7). They require many resources to execute properly, risk dispersing combat power into nonessential portions of the area, and risk exposing more of the force than necessary to threat fires. In urban offensive combat, forces most effectively use the frontal attack at the lowest tactical level once they set conditions to ensure that they have achieved overwhelming combat power. Then the force of the frontal attack overwhelms the threat with speed, firepower, and shock action.

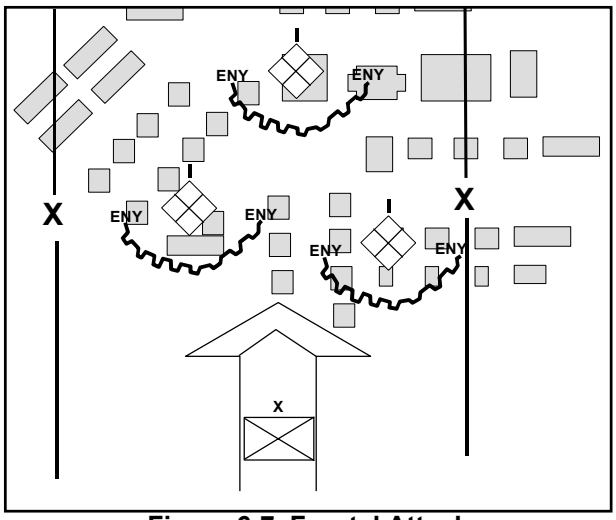

Figure 6-7. Frontal Attack

Forms of Attack in the Urban Offense
Metz – 1944

In November 1944, the US Third Army launched its final effort to take the French city of Metz from the defending Germans. This was the Army's third attempt. The first attempt had been a surprise, mounted attack. This was followed by a series of piecemeal infantry assaults on the surrounding fortresses. Finally, a deliberate effort was made to take the city in a coordinated effort by XX Corps.

The initial failures stemmed from a shortage of resources on the US side, to include fuel and units—especially infantry. This added to the ad-hoc nature of the first two efforts. The third effort, though more deliberate, was still constrained by resources. XX Corps could only muster three nearly full-strength infantry divisions to attack the German's defending with four under-strength divisions.

The third attempt to take Metz demonstrates how a corps operates with multiple divisions using various forms of attack to achieve its objective in urban offensive operations.

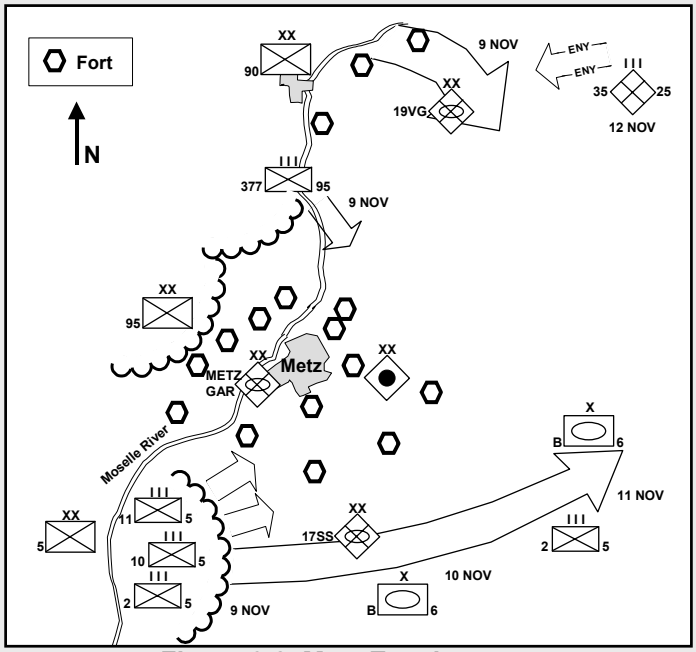

Figure 6-8. Metz Envelopment

The opening phase of the Metz battle had attacks by the 90th and 5th Infantry Divisions to envelop the city from the north and south (see Figure 6-8). This isolated the city and ensured the garrison could not escape nor be reinforced. The garrison was under orders from Hitler not to conduct a breakout and to resist to the last man; thus, German forces strongly counterattacked both wings of the envelopment to prevent isolation.

The second phase of the operation was the penetration of the city defenses from multiple directions. The 5th Infantry Division penetrated into the city with the 10th and 11th Infantry Regiments from the south. The 95th Infantry Division penetrated into the city from the north with the 377th Infantry Regiment and TF Bacon. Simultaneously, the 95th Infantry Division infiltrated battalions through the string of fortress positions guarding the western approaches into the city, isolated, and bypassed these positions with its other two regiments.

The final reduction of the defense was a series of battalion frontal attacks, which took place against the last remaining strongholds within the city. Even in these final engagements, however, the infantry battalions isolated, bypassed, then attacked from the flanks and rear whenever possible (see Figure 6-9).

The city was declared secured on 19 November. However, at that point more than a half-dozen of the fortresses had yet to be reduced. The 95th Infantry Division, after a four-day rest, quickly moved forward to rejoin the still rapidly advancing corps forward elements. Elements of the 5th Infantry Division remained in siege posture around the remaining strong points, the last of which surrendered on 19 December 1944 when it ran out of food. US forces made no efforts to attempt to assault these bypassed fortresses although extensive psychological operations (PSYOP) were used.

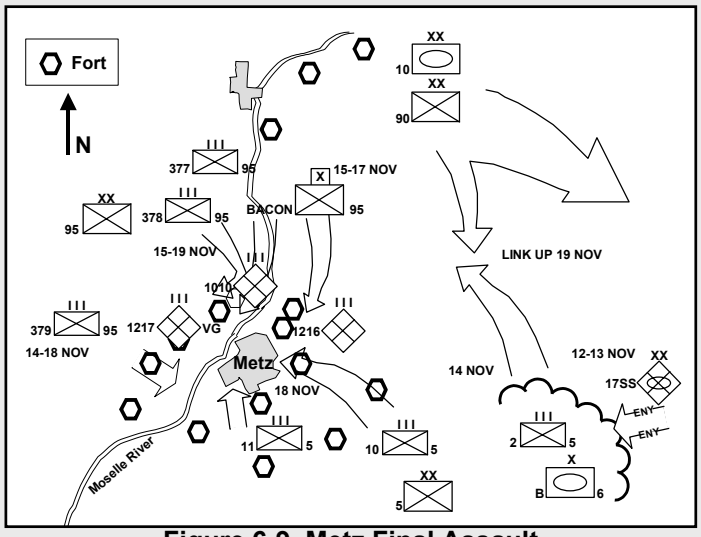

Figure 6-9. Metz Final Assault

TYPES OF OFFENSIVE OPERATIONS

Movement to Contact

6-33. In an urban area where the threat situation is vague, Army forces conduct a movement to contact to establish or regain threat contact and develop the situation. Often a movement to contact in an urban area occurs as both sides try to establish their influence or control over a contested population center. The situation determines whether the movement to contact or its specific technique, the search and attack, is appropriate. A conventional force-oriented movement to contact will likely take place when friendly and threat conventional forces attempt to establish control simultaneously. Initially, neither side is defensive. The friendly force aims to quickly locate and fix the threat while establishing control of the urban area and its key infrastructure. The search and attack technique works well when a smaller threat has established a noncontiguous defense in an urban area. This operation is characterized by the friendly point defense of key infrastructure, robust reconnaissance, and rapidly concentrated combat power to fix and defeat or destroy threat resistance once located.

6-34. A meeting engagement often results from the movement to contact. It occurs when a moving force that is partially deployed for battle collides with and engages a threat at an unexpected time and place. In a meeting engagement in an urban area, the unit that reacts most quickly and decisively will likely win. Rapid and accurate decisionmaking depends heavily on understanding the nature of the urban area and its impact on operations. Thus, in a meeting engagement, commanders quickly assess the impact and role of all components of the urban environment (terrain, infrastructure, and society)

on the operation. Responsive reconnaissance and situational understanding are also important. This permits accurate decisionmaking regarding where to attack, where to defend, and how to allocate resources. Situational understanding enhanced by digital INFOSYS that provide an enhanced common operational picture (COP) facilitates the rapid reaction of Army units and a synchronized response. This reaction and response allow Army forces to seize the initiative and dominate the threat.

Attack

6-35. The attack is the most common and likely offensive operation that Army forces will conduct in an urban environment. Commanders conducting major operations and commanders of large tactical units usually execute deliberate attacks. In the urban environment, units larger than battalion-size rarely conduct hasty attacks. Hasty attacks are common below company level as units use their initiative to take advantage of tactical opportunities. Larger units will conduct hasty attacks when threat defenses are disrupted or unprepared, to take advantage of an unexpected situation, and to prevent the threat from establishing or re-establishing a coherent defense.

Exploitation

6-36. Exploitation follows a successful attack to disrupt the threat in depth. Commanders of major operations consider focusing exploitation attacks on urban areas. A threat defeated in an attack will attempt to rally units, reinforce with reserves, and reorganize his defense. With its information and communications capability, transportation network, and defensive attributes, the urban area is the natural focal point to reestablish a disrupted defense. By establishing urban centers as the objectives of the exploitation, commanders deny the threat the location he needs to reestablish his defense. The exploitation focuses on the urban area as well as on the remnants of the threat. A successful exploitation to seize an urban area works efficiently because the attack preempts the defense and denies the threat the full advantages of urban terrain.

6-37. Commanders conducting exploitation acknowledge the vulnerability of their forces to counterattack and ambush in urban areas. An urban area provides ideal cover and concealment to hide threat reserves, reinforcements, or reorganized forces. Constrictions of routes into and through the urban area make exploitation forces a potentially dense target and limit maneuver options. Robust and well-coordinated reconnaissance, tactical dispersal, and use of advance guard security forces protect against this threat (see Defensive Combat Power: Suez City vignette in Chapter 7).

Pursuit

6-38. The pursuit is designed to destroy threat forces attempting to escape. It focuses on the threat and not on urban areas. When conducting a pursuit, Army forces move through undefended urban areas and bypass those in which threat forces successfully take refuge. The threat will likely attempt to use urban areas to disrupt the pursuit and permit the threat main body to escape. Commanders prevent escape by denying the threat the time to establish forces in urban areas that cannot be bypassed. The agility of Army

aviation forces for attack, reconnaissance, and transportation is essential to execute a successful pursuit around and through urban areas.

URBAN OFFENSIVE CONSIDERATIONS

6-39. The urban operational framework (assess, shape, dominate, and transition) provides a structure for developing considerations unique to urban offensive operations. The considerations vary depending on the situation and scale of the operation. Some considerations applicable to major operations that include an urban area will also be considerations at the tactical level focused in the urban area. However, no set rules exist. All urban operations are unique. Issues addressed at the operational level in one situation may be addressed in a new situation only at the tactical level. Under the right circumstances, a consideration may become an operational issue, a tactical issue, or a combination of the two. The following identifies some planning and execution issues that commanders conducting major operations address.

ASSESS

6-40. The first requirement, and a continuing requirement throughout the conduct of urban operations, is the assessment of the situation. Commanders base this assessment on detailed information regarding the particular urban area. Since the threat will likely dominate or control most of the urban area during the planning phase of offensive operations, accurate assessment of the urban environment will be difficult. A comprehensive intelligence, surveillance, and reconnaissance (ISR) effort in support of a rigorous intelligence preparation of the battlefield (IPB) process overcomes this obstacle.

Integrated Intelligence, Surveillance, and Reconnaissance

6-41. The commander of a major operation that includes an urban area, unlike his subordinate commanders, can target reconnaissance deep into the AO and area of interest. This begins the application of ISR resources against the urban area that may lead to decisive ground operations. This ISR effort and the assessment it supports continue as long as the urban area remains in the AO. Commanders of major operations initially direct ISR assets on those information requirements that support determining whether or not to conduct urban offensive operations. Once decided, ISR resources shift to support the planning and execution of the operation in the urban area.

6-42. The first resources that a senior commander can use are national and strategic sensors. He requests them through the appropriate joint force commander. The commander aggressively pursues full use of these systems to begin building an initial database for analyzing the significant aspects of the terrain; key infrastructure considerations; the status and disposition of the population; and the size, type, and disposition of threat forces in the area.

6-43. Simultaneously, multiple intelligence sources contribute to the database. The sources collect, process, store, display, and disseminate the relevant information on large urban areas through open and classified resources. These information sources include—

- Historical research.
- Travel brochures that include cultural information and recent maps.

- Classified debriefings of diplomats, businesses, DOD personnel, and allies.
- Military maps of the urban area.
- Previous intelligence assessments of the country, government, and population.

The gathering and analysis of human intelligence plays a critical part of this process and assists commanders in understanding ethnic, cultural, religious, economic, and political facets of the environment.

6-44. As the intelligence and the national reconnaissance and surveillance efforts progress, commanders will insert, if available and feasible, Special Forces reconnaissance assets into the urban environment. These elements will seek to confirm or deny the information received from imagery intelligence (IMINT), signals intelligence (SIGINT), and HUMINT sources. Among many factors, using SOF depends on their availability, the particular urban area, the area's ethnic composition, and the relationship between the urban population and the threat. Other joint operational reconnaissance and surveillance assets that higher-echelon commanders may have available might include the Joint Surveillance Target Attack Radar System, Guard Rail targeting aircraft, UAVs, and space-based systems.

6-45. The commander's staff will use all sources of information—IMINT and SIGINT sensors, HUMINT, historical research, and reconnaissance—to refine his ability to assess the urban environment. Digitally linking subordinate commanders with information sources helps to develop a COP essential to their situational understanding of the urban environment. The IPB process guides this assessment. As operations progress, additional reconnaissance and surveillance assets may become available. These may include corps intelligence assets including UAVs, corps long-range reconnaissance and surveillance units, counterfire radar, and air and ground cavalry. As these assets are employed, they are linked into the net of sources sharing information and further refine a common situational understanding of the environment. The major limitation shared by most corps assets is range. Corps reconnaissance has only a limited capability to conduct ISR with organic assets when out of contact with the AO. Thus, corps reconnaissance efforts, once in range, are most efficiently used against the most high-value information requirements.

Focused Assessment Efforts

6-46. In urban offensive operations, the tactical commander's assessment focuses on defeating the threat in the urban area within the constraints of the environment. Toward this end, identifying and assessing decisive points to attack is a commander's priority assessment task. Some unique aspects of the urban environment also require the focus of the commander's assessment efforts. These include the character of the urban defense, collateral damage considerations, and the effects of the environment on friendly and threat courses of action.

6-47. **Character of the Urban Defense.** To be both efficient and effective, Army urban offensive operations focus on what is decisive. Decisive points for an urban attack depend primarily on the mission within the urban area. They can vary widely in composition and size. Since commanders only focus

on the essential, they may determine the decisive point to be a single building or a limited sector of an urban area. It could be an entire system within the urban infrastructure such as communications and information, or a limited subsystem of the transportation and distribution infrastructure such as a single airfield. Sometimes what is decisive in the urban area is the threat military capability, but even this large an objective, when carefully analyzed, may not require destruction of all threat forces or control of all a large urban area. Decisive points relate directly to the threat's center of gravity and to mission success. Some decisive points related to the urban threat's center of gravity may be physically located outside the urban area.

6-48. To gain specifics on threat dispositions within the urban area requires reconnaissance capability to see into the depths of the area and the intelligence capability to determine the threat's likely defensive course of action. With this information, commanders can determine decisive points and apply Army combat power discretely against them. Effective urban offensive operations require detailed situational understanding of an area of interest that extends well beyond the perimeter of the urban area.

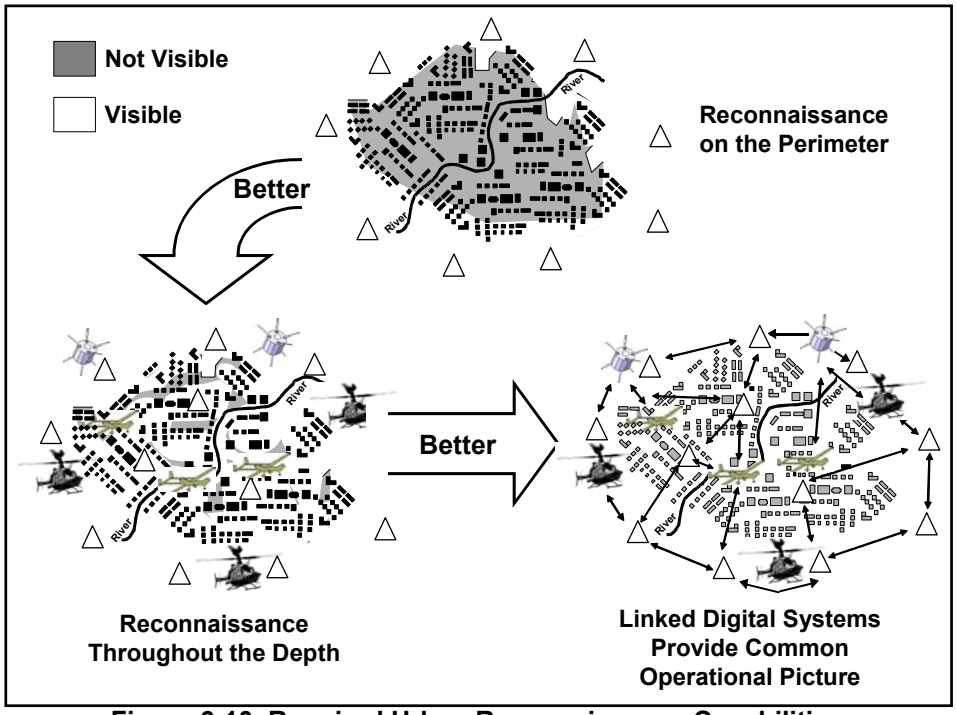

Figure 6-10. Required Urban Reconnaissance Capabilities

6-49. Commanders see throughout the depth of the urban area using several actions (see Figure 6-10). First, they evaluate sensor data and imagery. This guides targeting of special reconnaissance. Simultaneously, HUMINT is conducted using any persons who might know the urban area and threat. This includes civilians (allies, aides, neutrals, obstacles, and hostiles) and POWs. Finally, tactical conventional reconnaissance assets including reconnaissance forces, aviation, artillery radar, signals intelligence, and UAVs are directed at the urban area. All these sources and data are linked through digital

INFOSYS to provide commanders and their subordinates with improved situational understanding and a COP.

6-50. **Collateral Damage Considerations.** Commanders also assess the collateral damage risks that his operation may include. This assessment helps to initially determine the viability of a course of action. However, commanders reassess their courses of action at frequent intervals in urban offensive operations based on known information to determine if the original evaluations remain valid. This reassessment minimizes potential collateral damage from a change in mission or a change in a course of action. Many aspects of the environment can change during mission execution.

6-51. **The Environment's Effects on Courses of Action.** The urban environment's unique aspects can significantly impact the course of action chosen by Army forces and the threat. Commanders assess these effects in planning, but they also verify and monitor these effects as forces execute offensive missions. In particular, commanders will want to confirm the civilian population's locations, beliefs, and actions and to monitor any changes. They will need to validate terrain considerations and monitor how any changes based on rubble and other damage to structures. In urban terrain, dead space, cover, and concealment can only be identified physically and will change considerably as operations affect the terrain.

SHAPE

6-52. Commanders of major operations have a primary contribution to urban operations: the planning and conduct of effective shaping operations that set the conditions for subordinate tactical success. In urban operations, isolation will be a critical condition. Effective isolation will require persistent, continuous surveillance and reconnaissance, innovative use of fires and maneuver (including effective force allocation decisions), and well-established sensor-to-shooter links. These efforts—combined and synchronized with SOF's direct actions, IO that minimize noncombatant influences, and necessary shaping attacks (particularly the seizure of a foothold)—establish the conditions necessary for the subsequent offensive domination of the area.

Isolation is Essential

6-53. One key to success in the history of urban operations has been the effective isolation of the threat force (see Figure 6-11). This applies today and equally well to major urban offensive operations as it does to smaller-unit attacks. This isolation not only denies access to the urban area from outside but also contains threat forces within. In a modern metropolis or megalopolis, this can appear a daunting task. Operational isolation requires dominating all physical and electronic contact between the threat in the urban area and supporting threat forces outside the urban area. This does not necessarily require physically encircling the urban area, but it does require that Army forces be able to exert *control* over the area's entire perimeter, as well as decisive points within. For a sprawling urban area, successful isolation may require the commitment of a large amount of resources.

6-54. Successful isolation of the urban area depends as much on the nature of the threat as it does on any other factor. A conventional threat in a large

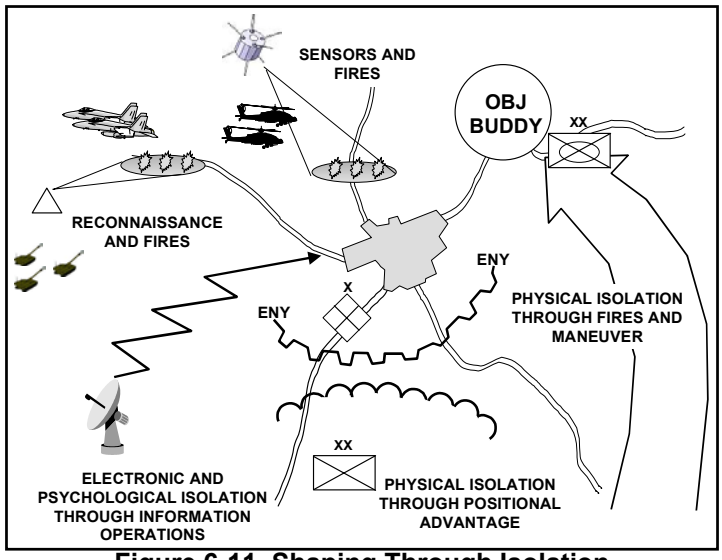

Figure 6-11. Shaping Through Isolation

urban area may be much easier to isolate than an insurgent threat in a much smaller urban area. The forces needed in the former situation may be less than those needed in the latter. The more the characteristics of the threat are conventional in nature generally the easier it will be to isolate him using standard combat methods and equipment. Isolating a more unconventional force requires many of the same techniques as used against conventional forces. It also requires a much greater ability to conduct offensive IO, to integrate CA units and civil-military operations (CMO), and to work with allies and local authorities. Fundamentally, isolating a less conventional threat puts increased emphasis on separating combatants from noncombatants.

6-55. **Offensive Isolation Objectives.** Isolation seeks to achieve two primary objectives with respect to defeating a threat's urban defense:

- Weaken the overall coherence of his defense.
- Manipulate or limit his maneuver options.

Isolating the threat in the urban area from external support, as well as isolating him from sources of support within the urban area, weakens his overall defense. The defense is weakened through a combination of attrition (the threat cannot replace his losses) and the diversion of his combat power from the defense to operations to counter the isolation effort. Isolation can also prevent the threat from shifting his forces to reinforce decisive points in the urban area or to conduct counterattacks.

6-56. **Persistent Surveillance.** Persistent surveillance of the urban area is essential to all types of actions used to isolate an urban area and as complete as resources will allow. Surveillance of the urban area relies on either reconnaissance forces or sensors continuously observing or monitoring urban avenues of approach. This network of ISR assets updates the commander's assessment of the situation and provides the means to quickly identify and, if necessary, attack threat elements as they move. However, particularly with sensors, commanders know that not each detection is necessarily an enemy to be attacked. Noncombatant activity clutters the environment making it easier for threats to disguise themselves and increasing the burden (and the number of resources required) on Army forces to distinguish friend from foe.

6-57. **Fires and Maneuver.** Fires and maneuver may be used to achieve isolation, either singly or in combination. (As always, effective obstacles,

monitored by sensors or observation, are integral to any isolation technique.) First, attacking forces can pre-position themselves along avenues of approach to deny entry and exit through positional advantage. Relying primarily on this method of isolation, particularly around a large urban area with multiple avenues of approach, can be resource intensive. Instead, the pairing of fires and maneuver provides attacking commanders more flexibility and allows them to isolate several avenues of approach with fewer resources. Highly mobile attack helicopters are ideal for this purpose as long as these operations occur outside the threat-controlled portions of the urban area. In these threat-controlled areas, it is more difficult to identify, eliminate, or effectively suppress the air defense threat. The threats may have numerous man-portable air defense weapons and enhanced effects of small arms used for air defense. Therefore, the risk to using this equipment may outweigh the potential benefits. However, mobile ground units—such as an air assault (subject to the same air defense threat considerations as attack aviation), armored, or mechanized forces—can also rapidly move to attack and destroy a threat moving in or out of an urban area. Potential disadvantages of the combined, fires and maneuver, option are that the—

- Critical assets, on standby and dedicated to isolation efforts, may be unavailable for other missions.
- Attacking force may not locate the threat in time to complete its mission (an inherent risk to any attack).

6-58. Another alternative relies on indirect or joint fires alone to destroy the threat force. Its disadvantage is that fires alone rarely destroy or even stop a force from moving into or out of an urban area. Although targets and avenues of approach will require continual surveillance, it is usually a less resource-intensive option than those that include maneuver. It also does not normally require fires assets to remain on standby to accomplish the mission. However, fires must be able to reliably and quickly respond, which may not be the case for joint fires—particularly aircraft. For Army field artillery units and naval gunfire, the units must be in range, which requires careful positioning. A skilled threat can avoid interdiction fires by using the geometry of the area to identify gaps due to obstructing terrain or the firing unit's range limitations. It can also use concealment and weather to avoid observation. However, effective sensor-to-shooter links throughout the urban battlefield will reduce the threat's ability to hide (see Figure 6-12). A resolute threat may risk significant losses to fires to prevent isolation or may attempt to use noncombatants as a shield. Ultimately, commanders use innovative combinations of all techniques discussed. Some units will physically block key avenues of approach. Surveillance will monitor less important routes and avenues. Artillery fires, joint fires, and maneuver

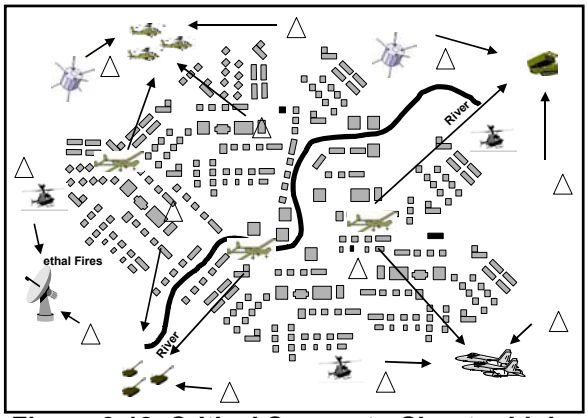

Figure 6-12. Critical Sensor-to-Shooter Links

units will then respond to the results of surveillance depending on the circumstances.

6-59. **Threat Reactions.** The reaction of the threat to the effects of isolation will depend on his mission, morale, force structure, and overall campaign plan. The threat may recognize isolation actions early and withdraw from the urban area before isolation is completed instead of risking destruction. On the other hand, the threat, based on a different or flawed assessment (perhaps a perception shaped by the Army force commander), may choose to—

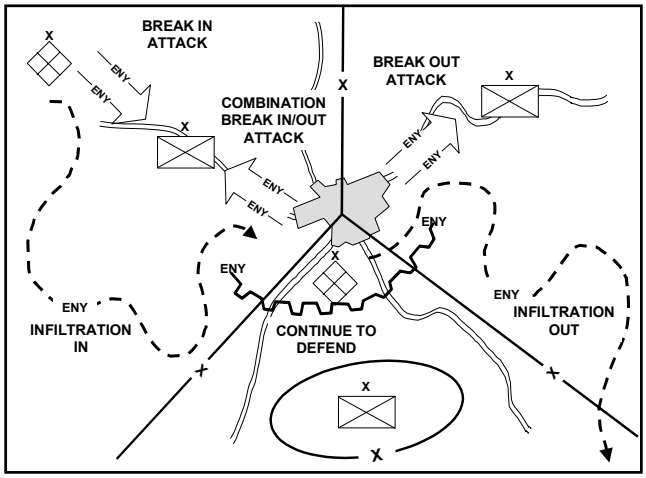

Figure 6-13. Reactions to Isolation

- Continue to defend and conduct local counterattacks.
- Attack to break into the urban area or infiltrate forces and supplies in.
- Attack to break out of the urban area or infiltrate forces out.
- Or any combination of the above (see Figure 6-13).

6-60. Attacking commanders consider how the threat leadership's subsequent actions will affect the continuance of overall offensive operations. They deliberate many considerations, to include—

- The allocation of more forces to the shaping operations to isolate the urban area.
- The allocation of more combat power to achieve rapid penetration and seizure of objectives to take advantage of developing threat dispositions in the urban area.
- Effects of the isolation on the urban population—either as a direct effect or as a response of the threat force being isolated.

Isolating the Urban Area
Hue, Vietnam – January to February 1968

On 31 January 1968, the 4th and 6th North Vietnamese Army (NVA) regiments and attached NVA and Vietcong (VC) sapper battalions attempted to seize control of Hue from the South Vietnamese Army's (ARVN) 1st Division as part of the North Vietnamese Tet Offensive. The attack, which was launched with complete surprise, successfully established temporary control over most of the city and occupied strong defensive positions within the city's ancient fortress known as the Citadel. However, it did not capture the headquarters of the ARVN 1st Division located in the Citadel nor the US military assistance command—Vietnam (MACV) compound located in the southeast part of the city.

Both ARVN and US forces swiftly reacted to the NVA attack. Within 24 hours, ARVN infantry and cavalry units counterattacked to recapture the Citadel. South of the Perfume River, the 1st Marine Division began attacking to clear the southern portion of the city (see Figure 6-14).

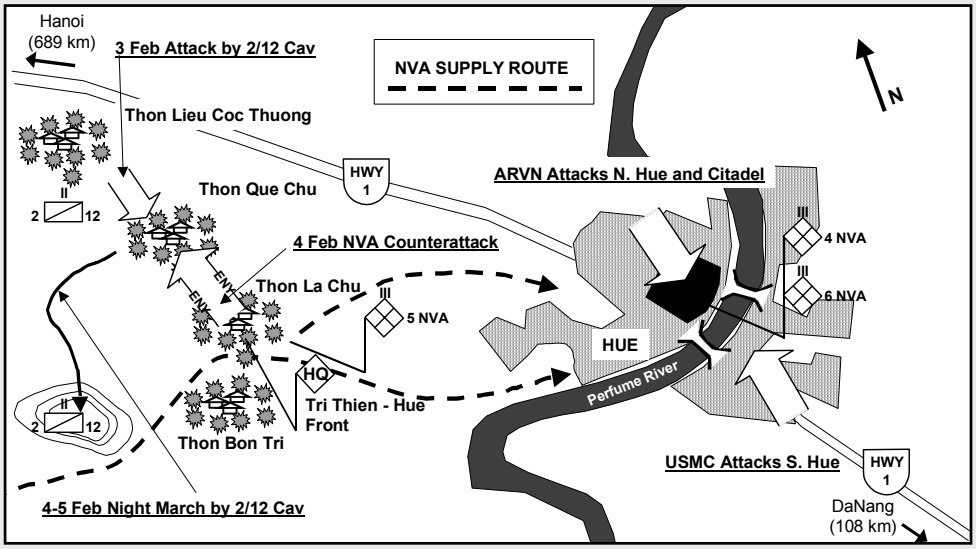

Figure 6-14. Initial Attack to Isolate Hue

On 2 February, the first Army unit was committed to Hue. The 2-12th Cavalry (an infantry battalion) was ordered to attack southeast along Highway 1 and clear enemy interdicting that route. On 3 February, 2-12th Cavalry began their attack moving along the south side of the highway. The plan was to clear a series of small hamlets in succession en route to the city itself. The first hamlet, Thon Lieu Coc Thuong, was cleared easily. Moving toward the second hamlet, Thon Que Chu, the battalion encountered a strong enemy force that was well entrenched. Air and artillery supported the battalion as it attacked and captured the hamlet against strong resistance. The battalion dug in for the night and prepared to resume the attack against the third hamlet, Thon La Chu, on 4 February.

Unknown to the 2-12th Cavalry, Thon La Chu was the headquarters of the Tri Thien-Hue Front, and it was defended by the NVA's 5th Infantry Regiment. Also important, the hamlet sat astride the NVA's primary supply route to the regiments fighting in Hue. The NVA was determined that 2-12th Cavalry's attack would not succeed; the NVA would destroy the threat to the Hue LOCs.

As the 2-12th Cavalry prepared to resume the attack on 4 February, the NVA fiercely counterattacked with all three battalions of the 5th NVA Regiment. It soon became apparent that 2-12th Cavalry could not continue to attack. As the day continued and the NVA pressure steadily increased, the battalion began to lose its position in Thon Que Chu. To avoid destruction, the battalion broke contact.

As darkness fell on 4 February, 2-12th Cavalry broke contact with the NVA. However, instead of retreating north back to its start line, the battalion moved west and then south to good defensive high ground deeper in the NVA AO. Eleven hours later the battalion was set in its new defensive position.

At dawn on 5 February, 2-12th Cavalry was established 5 kilometers west of Hue. The battalion soon observed enemy forces and supplies moving toward Hue. From its high ground position, the battalion directed artillery and air strikes against the NVA forces. By its bold move to bypass the 5th NVA Regiment, the battalion held perfect position to direct fires on the primary NVA supply line into Hue. These fires were the first step toward isolating the NVA in Hue.

The fires controlled by the 2-12th Cavalry shut down the NVA LOCs into Hue during the daytime. However, under the cover of darkness supplies and reinforcements were still entering the city (see Figure 6-15). The isolation of the NVA in Hue required the capture of Thong La Chu. The problem facing American forces was concentrating combat power against the NVA. All US units at this time were actively engaged against the numerous NVA attacks that constituted the NVA's 31 January Tet Offensive.

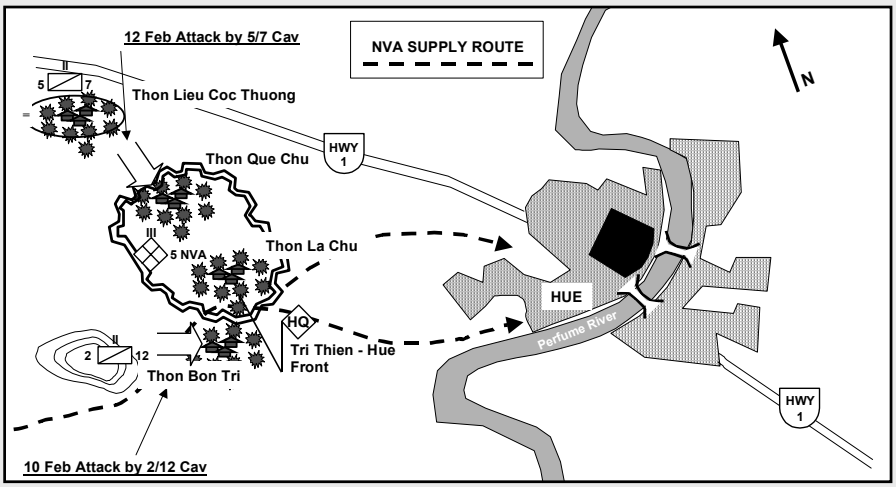

Figure 6-15. Subsequent Attack To Isolate Hue

The first additional American unit was not available until 12 February when the 5-7th Cavalry attacked Thong Que Chu much like the 2-12th Cavalry had attacked previously. The 5-7th Cavalry had even less success against the totally alert 5th NVA. The 5-7th Cavalry was forced to occupy defensive positions in Thon Lieu Coc Thuong and await the build up of combat power before it could continue to attack. In the interval, 2-12th Cavalry had moved off the high ground and captured the hamlet of Thon Bon Tri, south of the 5th NVA Regiment.

On 21 February, the 1st Cavalry Division had moved enough resources to the area to launch an effective attack to isolate Hue (see Figure 6-16 on page 6-24). In addition to the 5-7th and 2-12th Cavalry, the 1-7th Cavalry arrived in the AO and the 2-501st Airborne Infantry of the 101st Airborne Division was attached. On 21 February, after a combined artillery, air, and naval gunfire bombardment, the four battalions attacked the Thon La Chu stronghold. Elements of the 5th NVA Regiment were either destroyed in place or fled northeast. The next day resistance in Hue was noticeably lighter. US Marine and ARVN units began the last phase of fighting to recapture the Imperial Palace. On 26 February, the North Vietnamese flag was removed from the Citadel and the ARVN I Corps declared the city secured.

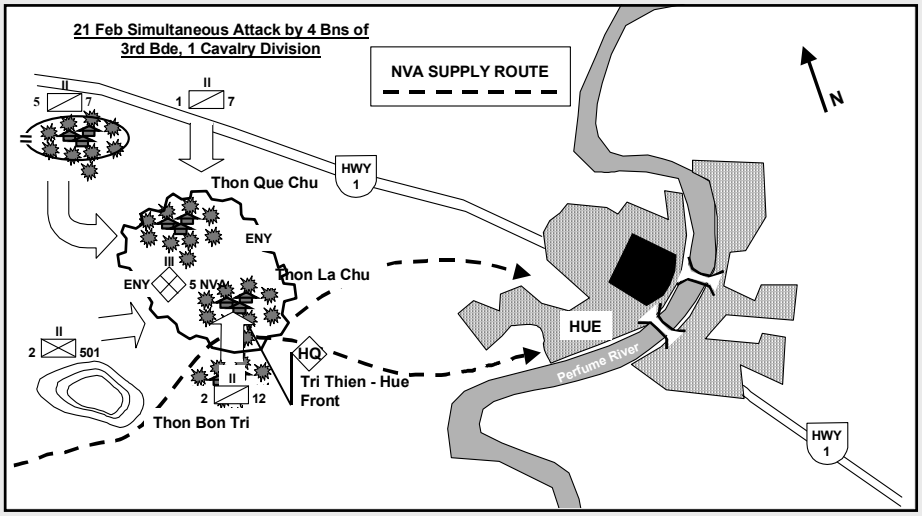

Figure 6-16. Final Attack to Isolate Hue

The actions of the 1st Cavalry Division forces northwest of Hue demonstrated the importance and the difficulty of isolating an enemy fighting in an urban area. Isolating Hue was difficult not only because of the dispersion and surprise with which the Tet Offensive caught US forces, but also because of the tenacity of the NVA. At least one-third of the combat power of the NVA in the Hue AO was focused on maintaining access to the city.

Hue's isolation had an immediate and important, if not decisive, impact on the operations. It not only resulted in restriction and then elimination of supplies and reinforcements, but it also immediately impacted the conduct of the defending NVA forces. Isolation caused an immediate drop in NVA morale and changed the nature of the defense. Once the enemy was isolated from external support and retreat, the objective of the NVA in the city changed from defending to avoiding destruction and attempting to infiltrate out of the city.

Direct Action by Special Operations Forces

6-61. Although SOF in urban offensive operations will likely conduct essential reconnaissance, they also have a direct action capability to shape the offensive operation (see Figure 6-17). Special Forces and Rangers can use direct action capabilities to attack targets to help isolate the urban area or to directly support decisive actions subsequently or simultaneously executed by conventional forces. Successful attacks against

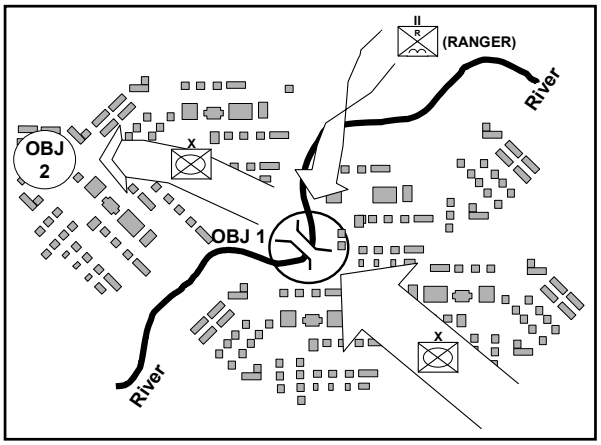

Figure 6-17. Coordination of SOF and Conventional Capabilities

urban infrastructure, such as transportation or communications centers, further the area's physical and electronic isolation. Direct action against command centers, logistics bases, and air defense assets can contribute to the success of conventional attacks by destroying or disrupting key threat capabilities. Direct action can also secure key targets such as airports, power stations, and television stations necessary for subsequent operations. Direct action by Special Forces and Rangers in these operations can reduce potential damage to the target or noncombatant casualties.

Information Operations

6-62. Regardless of how Army forces physically isolate the urban area, they combine physical isolation with IO to electronically isolate the threat and undermine his morale. Electronic isolation will cut off communications between forces in the urban area from their higher command to deny both from knowing the other's status. IO combined with isolation may persuade the threat's higher command or leadership that its forces located in the urban area are defeated. Thus, the command or leadership's intentions to break through to the besieged threat forces may be affected. PSYOP can undermine the morale of the threat in the area and reinforce electronic isolation and perceptions of abandonment. IO can be used to reduce any loyalty the civil population may have to the threat. IO can also ensure that civilians have the information that minimizes their exposure to combat and, as a result, overall noncombatant casualties. In addition, IO aim to deceive the threat regarding the time and place of Army force operations and intentions.

Detailed Leader Reconnaissance

6-63. Army commanders clearly see the urban environment to understand the challenges facing their brigades, battalions, companies, platoons, and squads. Urban terrain can be deceptive until viewed from the soldier's perspective. Commanders are responsible to intimately know the conditions to allocate resources effectively to subordinate units. Often, particularly at battalion level and above, commanders will not be able to command and control dispersed forces from positions forward, but be forced by the terrain to rely on semifixed command posts. Detailed leader reconnaissance of the AO by commanders, their staff, and their subordinates before the mission can compensate for this challenge. This reconnaissance will give commanders a personal feel for the challenges of the terrain and will facilitate more accurate planning and better decisionmaking during operations.

Mission Orders

6-64. Before contact, commanders mitigate some terrain challenges to effective C2 using mission orders. Subordinates have mission orders to take advantage of opportunities before C2 systems can adversely

> *Often what seems to be the correct decision at one level of command may be otherwise at other echelons. It is essential that leaders consider not only the perspective of their own unit, but that of other relevant participants as well, to include the enemy, adjacent friendly units, higher headquarters, and noncombatants.*
>
> Lesson Number 18
> *An Attack on Duffer's Downtown*

impact the environment. To see the battle and provide effective and timely direction, tactical leaders will follow closely behind units as they assault buildings, floors, and rooms. Thus, only the most mobile INFOSYS can accompany tactical leaders into combat, and they will suffer the degrading effects of the environment. Mission orders permit rapid and decisive execution without commanders intervening at battalion level and above. Higher-level commanders facilitate mission orders through their subordinates by articulating their desired end state, clearly stating their intent, and building flexibility into the overall plan.

Effective Task Organization

6-65. Commanders can shape urban offensive operations through effective and innovative task organization. Combined arms, starting with an infantry base, are essential to success and may be an asymmetric means of defeating an urban threat. Urban attacks will quickly break down into noncontiguous firefights between small units. To achieve the tactical agility for mission success in this nonlinear environment, many Army capabilities are task organized down to the company, platoon, and squad levels. Infantry provides the decisive capability to enter buildings and other structures to ensure threat destruction. Tanks, gun systems, and fighting vehicles provide additional mobility, direct firepower, and protection. Field artillery provides the indirect (and if necessary, direct) firepower. Such mobility and firepower create the conditions necessary for the dismounted infantry to close with and destroy a covered threat in an urban defense. When a threat skillfully uses the urban area to limit ground maneuver, vertical envelopment or aerial attack using precision-guided munitions from Army aviation may circumvent his defenses and achieve necessary effects. Generally, ground systems used *within* the urban area will not be able to operate independently from dismounted infantry. The infantry will be required to protect armor and mechanized systems from close antiarmor weapons, particularly when those weapons are used from rooftops and basements.

6-66. In urban offensive operations, direct fire support can be critical. Armor vehicle munitions types do not always achieve decisive effects against some urban structures. In some cases, field artillery high explosive munitions work better than armor for direct fire support of infantry. Large caliber (105 or 155mm) high explosives directly fired at a structure often produce a more severe shock effect than tank and fighting vehicle cannon and machine guns produce. This is not just a weapon but a weapon system. As such, artillery may be placed under tactical control (TACON) of maneuver commanders, such as a platoon of three guns TACON to a company or a battery to a battalion, not just one gun to a company or other maneuver unit. Self-propelled artillery has some of the mobility characteristics of armor; however, it provides minimal ballistic protection from fragmentation for the crew. Although these systems seem formidable, they provide less crew protection than a Bradley fighting vehicle, for example, and contain large amounts of onboard ammunition and propellant. They are susceptible to catastrophic destruction by heavy automatic weapons, light cannon, and antitank fire. Therefore, infantry units carefully secure and protect these systems (even more so than armored vehicles) when employed in urban offensive operations, particularly when forward in the direct fire role.

6-67. Army aviation may also be inventively task organized. It can support urban operations with lift, attack, and reconnaissance capabilities. Tactical commanders down to company may use all these capabilities to positively influence ground close combat. Army attack and reconnaissance aircraft can provide flank security for attacking ground forces. Attack aircraft may also provide direct fire support to individual platoons or squads. Lift may move entire battalions as part of brigade operations, or it may move single squads to a position of advantage (such as a roof) as part of a small unit assault. Army aviation can assist with C2 by providing airborne retransmission capability, airborne command posts, and the confirmed status and position of friendly forces. However, Army aviation is a limited and high-value asset; commanders review its use in innovative task organizations. It is particularly vulnerable to urban air defense threats unless used over terrain secured by ground forces. From these positions, aircraft can use enhanced sensors to conduct reconnaissance and use precision weapons with standoff capability.

Creative Task Organization: Using Artillery in the Direct Fire Role

Task organizing artillery to permit its use in a direct fire role demonstrates the innovative task organization required for urban operations. The following provides three historical examples of task organizing and using field artillery for a direct fire role.

In 1944, US Army units of the 1st Infantry Division were assigned to attack and seize the German city of Aachen. The city's internal defense included bunkers designed to serve as air raid shelters. These positions, buildings of stone, were impervious to direct fire tank weapons, demolitions, and small arms. To reduce the positions, the 1st Infantry Division relied on the artillery's direct fire.

Field artillery used this way had physical and psychological effects on the defenders. The 26th Regimental Combat Team's history of the battle describes the German reaction to the artillery pieces:

> *The chief shock to the defenders, Colonel Wilck (Aachen defense commander) said, came from the self-propelled 155s and tanks. The colonel spoke with considerable consternation of the 155mm self-propelled rifles. A shell from one of the guns, he said, pierced three houses completely before exploding and wrecking a fourth.*

The 26th Infantry Regiment also described how the artillery, one piece attached to each assaulting infantry battalion, helped the infantry to penetrate buildings.

> *With solid blocks of buildings comprising most of the city, there wasn't any easy way to get at the Germans in the buildings. The eight-inch gun solved the problem. Beginning on the eastern outskirts the gun would plow a round into the side of the built up block of buildings at about ground level. One shell would usually open an entrance into the first tier of floors, i.e. the first building. Then several more shells were fired through the first hole. Thus a tunnel would be rapidly made all the way to the next cross street. Soldiers could then rush the newly formed entrance, clear the upper floors with hand grenades and rifles and then move on to the next building to repeat the process. When a block or*

square, was thus completely cleared of Germans—soldiers, skulkers, or even snipers—the next square was treated in the same way, working forward square by square, right and left, thereby avoiding nearly all exposure in the streets.

In 1982, Israeli forces invaded southern Lebanon to destroy base camps of the Palestine Liberation Organization (PLO). This operation involved significant fighting in urban areas including major operations in Beirut. Artillery, firing in a direct fire role, played a major part of the tactical solution. Artillery was particularly effective in the 33-day siege of Beirut. During this siege, Israeli forces used artillery in its traditional role as well as in the direct fire role.

The Israeli army was committed to a policy of disproportionate response during the Beirut siege. When fired on with small arms, crew-served weapons, tanks, or indirect artillery, the Israeli forces responded with intense, high-caliber direct and indirect fire from tanks and artillery positioned around the city. Many firing positions were on heights to the south and southwest that dominated much of the city. These positions had almost unrestricted fields of view. Israeli artillery fired from these positions directly into high-rise buildings concealing PLO gunners and snipers. The artillery, using direct fire, destroyed entire floors, collapsed floors on top of each other, and completely removed some upper floors. Such a response, as in Aachen in 1944, had as much a psychological impact as it did a physical impact on the PLO defenders.

In the early hours of 20 December 1989, the US launched OPERATION JUST CAUSE. One of this operation's objectives was removing the Panamanian dictator, Manuel Noriega. US forces carefully planned using all fires before the operation to minimize casualties and collateral damage. Part of this detailed fire planning called for applying artillery in a direct fire role.

The Panamanian Defense Force's (PDF) 5th Rifle Company based at Fort Amador was one of the key objectives of US forces at the start of hostilities. This unit was high priority because it was the closest PDF unit to Noriega's headquarters, the Comandancia. US forces expected the 500-man company to react first to OPERATION JUST CAUSE by reinforcing the defense of the Comandancia. It also posed a threat to US military dependents housed at Fort Amador.

To quickly neutralize this force, the US assembled a three-company force composed of A, B, and headquarters elements of 1-508th Infantry (Airborne), supported by 105mm towed howitzers of 320th Field Artillery and M113 armored personnel carriers. The howitzers and the personnel carriers were covertly prepositioned at the fort. At approximately 0100, helicopters transported the two airborne rifle companies into position. The howitzers then suppressed any personnel in the PDF-controlled buildings on Fort Amador while demonstrating the firepower of the US task force. They used direct fire into the PDF barracks. The impact of the 105mm high explosives and .50-caliber fire from the M113s convinced the PDF infantry to give up after token resistance. Following the direct fire, US infantry assaulted and cleared the dozen PDF buildings, finding that most occupants had fled or surrendered. For more details of OPERATION JUST CAUSE, see Applying the Urban Operational Framework: Panama in Chapter 5.

The three examples cited indicate the importance of the innovative task organization of artillery and its use in the direct fire role. Using artillery helps overcome some challenges of offensive operations in the urban environment, and it has an important psychological effect on a defending threat. Such task organization takes a traditional tool of a higher-level tactical commander and uses it to directly influence the company-level battle. This philosophy of task organization can be applied to other types of forces—not just artillery. PSYOP teams, interpreters, CA specialists, armor, and reconnaissance teams may require task organization different from traditional organization. The compartmented urban environment drives the requirements for these assets lower in the tactical scheme than in open operations. Consequently, commanders understand and account for more of these assets for UO than for operations in less restrictive environments.

Shaping Attacks

6-68. In a large urban area, the defending threat cannot be strong everywhere. Shaping operations can also take the form of attacks against vulnerable positions to force the threat to maneuver and redeploy his forces in the urban area. This prevents him from merely defending from prepared positions. Forcing the threat to move negates many of the defensive advantages of urban terrain, confirms his dispositions, exposes vulnerable flanks, and permits target acquisition and engagement with precision standoff fires.

6-69. A critical shaping operation in urban offensive operations is usually an initial attack to seize a foothold. Once Army forces establish this foothold, they accrue some of the defensive advantages of urban terrain. From this protected location, Army forces continue offensive operations and have a position of advantage against neighboring threat defensive positions.

DOMINATE

6-70. Commanders may employ several methods to dominate the urban area during offensive operations. These include—

- Bold maneuver.
- Appropriate use of SOF.
- Precise application of fires and effects.
- Proper balance of speed and security.

None is unique to UO. Their effective execution, however, allows Army commanders to dominate in this challenging environment by effectively using resources with the least amount of collateral damage. Overall, domination results from urban offensive operations when forces achieve the objective of the assigned mission and establish preeminent control over the necessary terrain, population, and infrastructure. Largely, the Army commander's ability to dominate is based on understanding and accepting the challenges posed by the urban environment and using that knowledge to his advantage.

Bold Maneuver

6-71. Commanders of major operations may have or create the opportunity to seize an urban area with bold maneuver. Such maneuver requires striking

while the area remains relatively undefended—essentially preempting an effective defense. This opportunity occurs when the urban area is well to the rear of defending threat forces or before the onset of hostilities. Under such conditions, an attack requires striking deep behind threat forces or striking quickly with little time for the threat to make deliberate preparations. Attacks under such conditions may entail significant risk; the potential benefit of audacious offensive operations may be well worth possible losses. Such attacks can be accomplished three ways (and their combinations):

- Airborne or air assault.
- Amphibious assault.
- Rapid penetration followed by an exceptionally aggressive exploitation, for example, a heavy force using shock, armor protection, and mobility.

6-72. Commanders analyze all potential urban operations to seek an opportunity or advantage to apply bold operational maneuver to the task. Using operational maneuver to avoid urban combat against an established threat defense potentially marks a significant operational achievement and can have decisive strategic consequences. Just influencing the threat's morale can positively affect all future operations. However, commanders evaluate the challenges of such a course of action. These challenges may include sustaining the operation; avoiding isolation and piecemeal destruction; successfully conducting shaping attacks; and achieving the necessary tactical, operational, and strategic surprise.

6-73. Commanders also build on the shaping effects of isolating the urban area internally and externally by attacking urban decisive points from multiple directions. They can attack multiple decisive points either simultaneously or in a systematic, synchronized manner. This complicates the threat's situational understanding of the urban environment, further impedes his decisionmaking, and allows Army commanders to dictate the tempo.

Bold Operational Maneuver to Seize an Urban Area
Inchon and Seoul, Korea – September 1950

In August 1950, UN forces in Korea were desperately attempting to stave off defeat by establishing a viable defense in southern Korea. This defense, known as the Pusan Perimeter, was the focus of the world's attention. The commander of US Forces Far East, General Douglas MacArthur, was not focused on the US Eighth Army in Pusan. Instead, he focused on how to dramatically and decisively transition to the offense—the recapture of the South Korean capital of Seoul.

Seoul was more than just the South Korean political capital, although that was an important consideration. Seoul was the key to the Korean transportation system, the hub of the national communications system, and the center of the country's economy and culture. It was also strategically placed astride maneuver corridors to the north, south, and northeast. It had been Korea's capital since 1394 when King Taejo Yi Sung-Gye established it as the center of the Chosun dynasty. It had been captured by the surprise communist invasion of the south in June 1950, and the key to success in Korea was its recapture. The question was how.

The obvious military solution to the Korean situation in August 1950 was to build military strength within the Pusan Perimeter and then, when sufficiently strong, to

counterattack north and recapture Seoul. The disadvantage of this course of action was that the counterattack would be through hundreds of miles of mountainous terrain, through several major cities, and across numerous rivers. The North Korean People's Army (NKPA) would be able to fall back from one mountain defense and one river line to another and would have weeks or months to prepare the defenses of Seoul.

MacArthur's solution was to delay a conventional counterattack, boldly maneuver by sea deep into the flanks of the NKPA, land on the Korean west coast at Inchon, and quickly seize Seoul before the enemy could react (see Figure 6-18). This course of action had numerous disadvantages: achieving surprise; assembling a landing force trained in amphibious operations; few good landing sites; supplying a large force once landed; and needing to simultaneously continue to defend and prepare a counterattack with the Eighth Army from Pusan. MacArthur understood the challenges of the operation but believed that the potential value compensated for the risk.

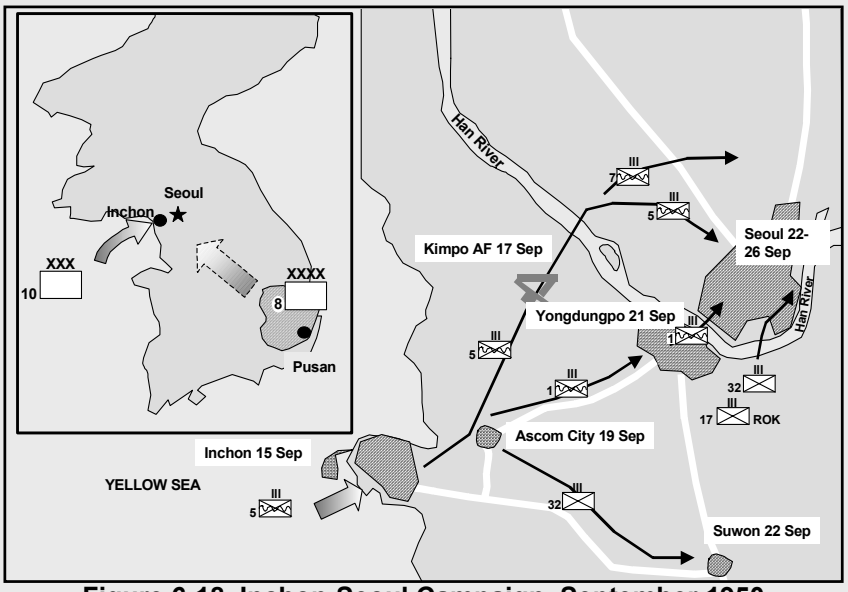

Figure 6-18. Inchon-Seoul Campaign, September 1950

The potential value of a quick assault on Seoul through a deep amphibious operation was immense. The operation would trap the bulk of the NKPA in South Korea and facilitate its destruction. It would also capture Seoul before the NKPA could prepare a defense. The quick recapture would immeasurably impact the morale of UN forces and South Korea. MacArthur felt the payoff of success justified the risks and challenges of the operation.

On 15 September, elements of the 1st Marine Division landed in Inchon taking the NKPA completely by surprise. On D+1 they were joined by elements of the 7th Infantry Division, both divisions under the control of US X Corps. Naval gunfire and Marine close air support flying from Navy aircraft carriers supported the landings. Seven days later, the 5th Marine Regiment had battled 25 miles to the outskirts of Seoul and began attacking the city from the north. Three days later, on 25 September, the 1st Marine Division and elements of the 7th Infantry Division had defeated the 10,000 defenders of the NKPA's 18th Rifle Division.

Most of MacArthur's predictions for the Inchon-Seoul campaign were accurate. Superb staff work, excellent logistics operations, and unmatched training permitted the UN forces to assemble a trained landing force, land it over one of the most difficult shores in the history of military amphibious operations, and keep it supported. More importantly, the operation achieved total strategic and operational surprise. Seoul was recaptured quickly and, although resistance was fierce, the NKPA could not react fast enough to influence the outcome. In conjunction with the Eighth Army counterattack from Pusan, 75 percent of the NKPA was destroyed. The Inchon-Seoul campaign was an important turning point in the war, and had not the Chinese People's Army intervened two months later, it would have been the decisive campaign of the war.

Appropriate Use of Special Operations Forces

6-74. Sometimes Army forces can dominate (instead of simply shape) the urban area using the direct action capability of SOF. When the threat fails to develop a comprehensive defense and does not possess large, capable conventional forces, then Army forces can achieve operational surprise. Commanders, by synchronizing conventional and SOF effects, may actively control offensive operations to dominate the area. Then, although SOF may be the primary striking force, conventional forces still are available to reinforce and assume the mission because of SOF limited logistic capability. OPERATION JUST CAUSE offers several examples of this type of synchronization (see Applying the Urban Operational Framework: Panama in Chapter 5).

Precise Application of Fires and Effects

6-75. Precisely applied fires and the massed effects of combat power characterize successful urban attacks. The fires can be direct fire from combined heavy or light ground teams; direct or indirect fires from supporting Army aviation standing off from the target and any possible air defense threat; or precision indirect fires from conventional tube artillery. All efforts strive to reduce collateral damage around the point of attack, consistent with mission success. Forces use fires to deny the threat the ability to maneuver in the urban area and to destroy the threat when he attempts to maneuver. When the threat exposes himself by moving, the environment no longer protects him, and fires can effectively engage him.

Proper Balance of Speed and Security

6-76. Attacking units balance speed and security. Forces secure flanks as units advance, control dominating terrain (buildings), evacuate civilians, and keep the integrity and synchronization of the combined arms team. Obstacles are anticipated and rapidly breached. Commanders choose avenues of approach to—

- Provide cover and concealment for following aviation and support units.
- Permit travel by all classes of vehicles.
- Easily defend from counterattack.
- Avoid nonessential centers of threat resistance.
- Avoid population centers

URBAN DEFENSIVE OPERATIONS AND BATTLEFIELD ORGANIZATION

7-19. Urban defensive operations are organized within the overall doctrinal framework of sustaining, shaping, and decisive operations. The success of urban defense depends on each operation, but commanders synchronize these simultaneous operations as one action. Sustaining operations in defensive urban operations (UO) ensure freedom of action. Critically, urban sustaining operations ensure security of the lines of communications and establish effective movement control. Shaping operations in defensive UO create the conditions for decisive operations. Shaping operations vary greatly depending on the type of defense. For example, in a mobile defense the shaping operation may be the fixing force. In contrast, in an area defense the fixed defense may be the decisive operation. In the urban defense, decisive operations focus on accomplishing the commander's mission. The decisive operation may not defeat the threat's main effort, and it may not prevent threat occupation of large portions of the urban area if those tasks are not essential to mission accomplishment. For example, if the defense's objective is to protect a critical communications node, then, depending on the commander's overall intent, threat actions to secure an airfield elsewhere may not be important.

TYPES OF URBAN DEFENSE

7-20. Commanders view urban area defensive operations two ways: as conducting a major defensive operation with an urban area in their area of operations and as defending entirely in an urban area.

AREA DEFENSE

7-21. At the operational level, an area defense may include both urban areas and open maneuver areas. The most common defense in an urban area and the most suitable for the characteristics of this distinct environment is the area defense. As a defensive operation, the area defense concentrates on denying threat forces access to designated terrain for a specific time rather than destroying the threat outright. Although an area defense in an urban area does not directly seek to destroy or defeat attacking threat forces, as an objective it does aim to force culmination of the threat's attack. The urban area defense often works effectively to exhaust threat resources and shape conditions for a transition to offensive operations. The urban area may also be used as a strong point to force threat movement in a different direction or to fix threat forces as part of a large, mobile defense taking place in the area of operations (AO) outside the urban area (see paragraphs 7-22 to 7-24).

MOBILE DEFENSE

7-22. A mobile defense can operate *in* an urban area but only under specific conditions. It focuses on destroying or defeating the threat through a decisive attack by a striking force. It requires the defender to have greater mobility than the attacker. To shape a mobility advantage, the urban defender effectively uses the terrain and correctly task organizes his forces mobility. The principles of applying the mobile defense in the urban area remain the same: a small fixing force stops the threat and limits any ability to maneuver while a striking force quickly maneuvers and counterattacks to destroy him.

7-23. One key to executing a mobile defense in the urban area is to entice a threat force into the depths of the urban area where it begins to lose mobility options. A well-placed fixing force augmented with man-made obstacles and taking advantage of the naturally constrictive terrain can stop a much larger force. If the attacking force is largely mounted and armored, its mobility in the urban area may be reduced to less than that of dismounted infantry. In addition, if the attacking force's movement into the urban area is mounted and rapid, the commander's situational understanding also diminishes. Then the striking force, consisting of dismounted infantry forces, can execute the counterattack with surprise from multiple directions and dimensions (subsurface, surface, supersurface to include intrasurface, and airspace). Man-portable antiarmor weapons—firing from flanks and top down and supported by precision indirect fires from both organic and joint systems—can rapidly destroy the threat.

7-24. From the perspective of commanders of the major operation, the urban environment can help defending forces achieve a mobility advantage over an attacker in a broader sense. Defending commanders attempt to shape the battlefield so that the attacker commits significant resources into an urban area, where his maneuver capabilities are reduced (see Figure 7-1). A disproportionately small defending force, which relies on the defensive combat power advantages of the urban environment, reduces and fixes the attacker's maneuver capabilities. Other defending forces mass *outside* the urban area then strike the threat with a combined mobility and firepower advantage.

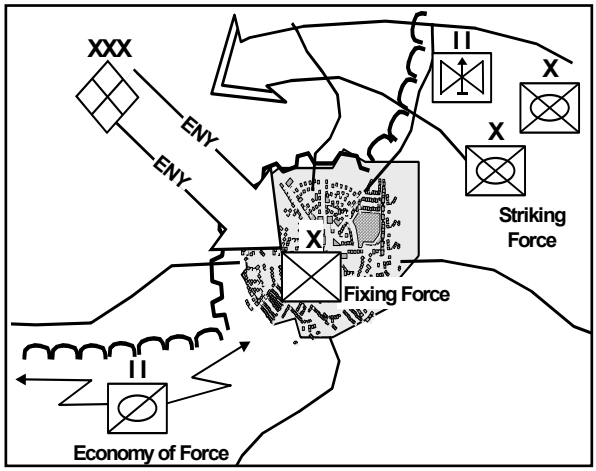

Figure 7-1. An Urban Area Incorporated Into a Larger Mobile Defense

Urban Defense in a Major Operation
Stalingrad – August 1942 to January 1943

The German and Soviet battle for Stalingrad in late 1942 and into early 1943 illustrates how a tactical urban area defense integrates into a larger mobile defense. Stalingrad was a battle fought on a huge scale: it involved army groups on both sides and thousands of square kilometers. Though the city was small, it remained the focus of both German and Soviet offensive and defensive operations during the six-month battle.

In the summer of 1942, the Germans launched a strategic offensive in southern Russia. Its goal was the valuable oil fields of the Caucasus. German forces turning south into the Caucasus exposed a vulnerable flank to Soviet forces positioned between the Don and Volga Rivers. For the German Caucasus

operation to succeed, it had to destroy Soviet forces between the Don and Volga, establish a good defensive line, and capture Stalingrad. This city would anchor the German defense and interdict the critical flow of supplies from the Caspian Sea via the Volga River into central Russia. Stalingrad, by virtue of its name, also had important political and cultural value to the Germans and Soviets.

The opening phases of the German offensive were successful; German forces—the 6th Army and 4th Panzer Army—entered the outskirts of Stalingrad in late August 1942 (see Figure 7-2). After a month of intense fighting, the Germans possessed nearly 90 percent of the city. At this point, the 6th Army commanded all German forces in and around Stalingrad. The Soviet 62nd Army's defense was reduced to a front only a few hundred meters deep and a couple of kilometers long on the banks of the Volga. The Soviet defenses hinged on fortress-like concrete industrial buildings and the fanatical bravery and tenacity of soldiers and civilians fighting in the city's remains (see Figure 7-3).

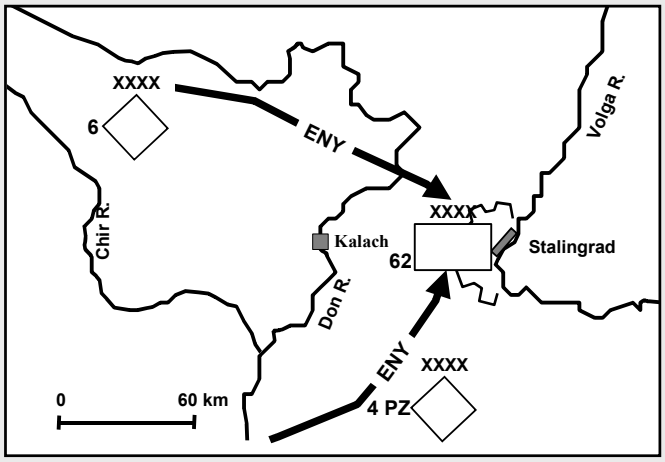

Figure 7-2. German Attacks to Seize Stalingrad

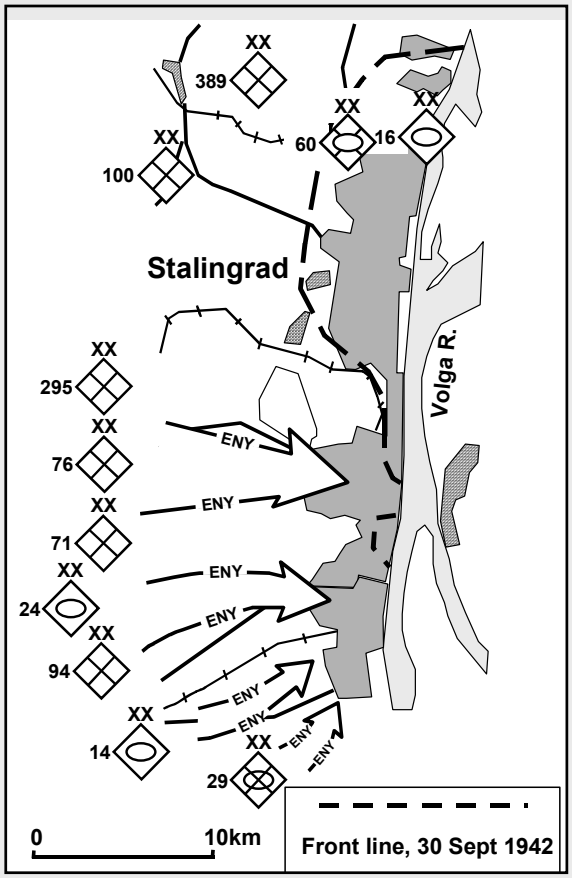

Figure 7-3. German Attacks to Seize Stalingrad, September 1942

Beginning in mid-September, the Soviet command began looking at how to convert the defense of Stalingrad into an operational opportunity. During October and November, the 62nd Army held on to its toehold in Stalingrad. While maintaining the defense of the 62nd Army, the Soviets secretly began to build up strength on both flanks of the German 6th Army. The Germans increased their vulnerability by securing the German 6th Army's flanks with less capable Romanian, Hungarian, and Italian armies. Also, the 6th

Army moved powerful German divisions into the city and rotated with German divisions that were exhausted by urban combat.

On 19 November, the Soviets launched OPERATION URANUS that attacked two Romanian armies with seven Soviet armies. Simultaneously, the 8th Russian Army attacked to aid the 62nd Army in further fixing the German 6th Army. Within five days, the Soviet armies of the Don Front, Southwest Front, and Stalingrad Front met near the city of Kalach and sealed the fate of the German 6th Army's 300,000 troops in Stalingrad (see Figure 7-4).

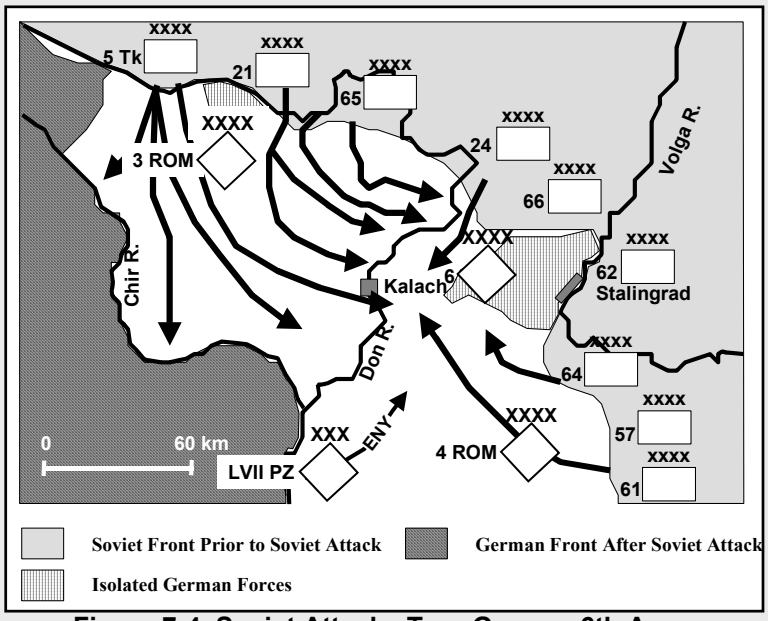

Figure 7-4. Soviet Attacks Trap German 6th Army

On the third day of the Soviet offensive, when encirclement seemed inevitable but not yet complete, the 6th Army commander asked permission to withdraw from the trap. The German high command denied permission believing that the Army could be supplied by air and then a renewed offensive could break through to the city. On 12 December, the German LVII Panzer Corps launched an offensive north to break through to Stalingrad. This offensive made progress until another Soviet offensive on 16 December forced its cancellation. This ended any hope of recovering Stalingrad and the 6th Army. On 31 January 1943, the 6th Army surrendered after sustaining losses of almost two-thirds of its strength. The Soviets took over 100,000 prisoners.

Many lessons emerge from the successful defense of Stalingrad. Tactically, the defense showed how using the terrain of a modern industrial city wisely could increase the combat power of an inferior, defending force and reduce the maneuver options of a mobile, modern attacking force. Another element in the Soviet's tactical success was the Germans' inability to isolate the defenders. The Germans never threatened the Soviet supply bases east of the Volga and, despite German air superiority, the Soviets continuously supplied and reinforced the 62nd Army across the Volga River. Also, Soviet artillery west of the river was able to fire in support of Soviet forces and was never threatened with ground attack.

At the operational level, the Soviets demonstrated a keen understanding of using an urban area within the context of a mobile defense. The 62nd Army's stubborn area defense of Stalingrad drew the bulk of the German combat power into the urban area where they were fixed by a smaller and quantitatively inferior defending force. This allowed the Soviets to build combat power outside the urban area. The Soviets set the conditions for a mobile defense by positioning powerful Soviet armor forces in open terrain outside the urban area against quantitatively inferior German allied forces. In OPERATION URANUS, the mobile defense's strike force destroyed the enemy outside the urban area and trapped the greater part of the best enemy formations inside the urban area. The trapped units were then subjected to dwindling resources and extensive psychological operations, further isolated into pockets, and defeated in detail.

RETROGRADE

7-25. A retrograde involves organized movement away from the threat. Retrograde operations include withdrawals, delays, and retirements. These defensive operations often occur in an urban environment. The urban environment enhances the defending force's ability to conduct retrograde operations successfully (see Figure 7-5).

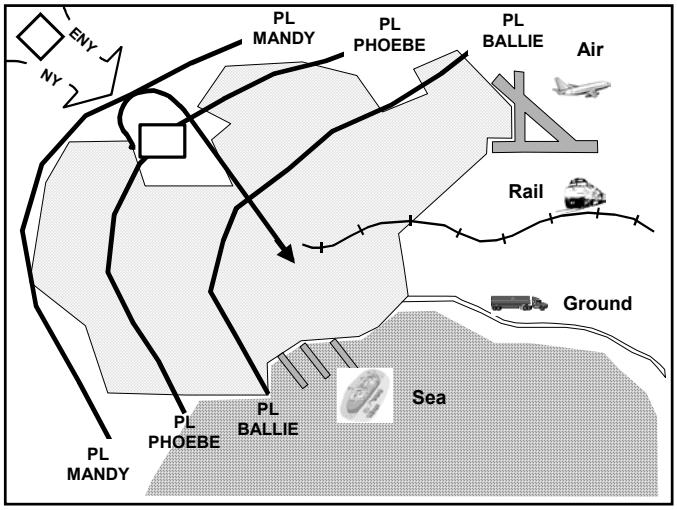

Figure 7-5. Retrograde Through an Urban Area

7-26. The cover and concealment afforded by the urban environment facilitates withdrawals where friendly forces attempt to break contact with the threat and move away. The environment also restricts threat reconnaissance, which is less able to detect friendly forces moving out of position, and presents excellent opportunities for deception actions. Finally, a small security force's ability to remain concealed until contact in the urban environment significantly slows threat attempts to regain contact once Army forces have broken contact and begun to move.

7-27. The urban environment's natural cover and concealment, as well as the compartmented effects, facilitates delays. Delays can effectively draw the threat into the urban area for subsequent counterattack or as an integral part of a withdrawal under threat pressure. Delaying units can quickly displace from one covered and concealed position to another; the repositioning options are vast. Compartmented effects force the attacking threat to move on well-defined and easily interdicted routes and limit the threat's ability to flank or bypass delaying positions.

7-28. The urban area's transportation and distribution network facilitates retiring forces that are not in contact. Properly used, the urban transportation system can quickly move large forces and associated resources, using port facilities, airfields, railheads, and well-developed road networks.

URBAN DEFENSIVE CONSIDERATIONS

> *What is the position about London? I have a very clear view that we should fight every inch of it, and that it would* devour *quite a large invading army.*
>
> Winston Churchill
> *War in the Streets*

7-29. The urban operational framework—assess, shape, dominate, and transition—provides structure to developing considerations for defensive operations. The considerations can vary depending on the level of war at which the operation is conducted, the type of defense, and the situation. Most issues discussed may, in the right circumstances, apply to both commanders conducting major UO and commanders at lower tactical levels of command.

ASSESS

7-30. The commander defending in the urban area assesses many factors. His mission statement and guidance from higher commanders focus his assessment. If the mission is to deny a threat access to port facilities in an urban area, the commander's assessment will focus much differently than if the mission is to deny the threat control over the entire urban area. The METT-TC—mission, enemy, terrain and weather, troops and support available, time available, civil considerations—structure guides the commander's assessment. Of these, the impacts of the threat and environment—to include the terrain, weather, and civil considerations—are significant to the commander considering urban defensive operations.

The Threat

7-31. In the urban defense, a key element is the commander's assessment of the threat. One of his primary concerns is to determine the attacker's general scheme, methodology, or concept. Overall, the attacker may take one of two approaches. The most obvious would be a direct approach aimed at seizing the objectives in the area by a frontal attack. A more sophisticated approach would be indirect and begin by isolating Army forces defending the urban area. Innumerable combinations of these two extremes exist, but the threat's intentions toward the urban area will favor one approach over another. The defending Army commander (whose AO includes but is not limited to the urban area) conducts defensive planning, particularly his allocation of forces, based on this initial assessment of threat intentions. This assessment determines whether the commander's primary concern is preventing isolation by defeating threat efforts outside the area or defeating a threat attacking the urban area directly. For the higher commander, this assessment determines how he allocates forces in and outside the urban area. For the commander in the urban area, this assessment clarifies threats to sustainment operations and helps shape how he arrays his forces.

The Environment's Defensive Characteristics

7-32. A second key assessment is the defensive qualities of the urban environment. This assessment, as in any defensive scenario, is based on mission requirements and on a systemic analysis of the terrain in terms of observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment (OAKOC). This assessment accounts for the unique characteristics of urban terrain, population, and infrastructure as discussed in Chapter 2.

SHAPE

7-33. Commanders of a major operation shape the urban battle according to the type of defense they are attempting to conduct. If conducting an area defense or retrograde, they use shaping actions like those for any defensive action. Important shaping actions that apply to all defensive UO include—

- Preventing or defeating isolation.
- Separating attacking forces from supporting resources.
- Creating a mobility advantage.
- Applying economy of force measures.
- Effectively managing the urban population.
- Planning counterattacks.

Preventing or Defeating Isolation

7-34. Failure to prevent isolation of the urban area can rapidly lead to the failure of the entire urban defense. Its importance cannot be overstated. In planning the defense, commanders anticipate that the threat will attempt to isolate the urban area. Defensive planning addresses in detail defeating threat attacks aimed at isolation of the urban area. Commanders may defeat this effort by allocating sufficient defending forces outside the urban area to prevent its isolation. Defensive information operations (IO) based on deception can also be used. It can mislead the threat regarding the defensive array in and outside the urban area. Such information can convince the threat that a direct attack against the urban area is the most favorable approach.

7-35. If the threat has successfully isolated the urban area, commanders of a major operation have several courses of actions. Two options are ordering the defending force to exfiltrate or conduct a breakout attack of the urban area or an attack by forces outside the urban area to relieve the siege. A third option combines the first two: counterattacks from both inside and outside the urban area to rupture the isolation (see breakout operations in FM 3-90). Time is critical to the success of either operation. Commanders plan for both contingencies to ensure rapid execution if necessary. Delay permits threat forces surrounding the urban area to prepare defenses, permits reorganization of the attacking force, and permits the threat to retain the initiative and continue offensive operations. The passage of time also reduces the resources of defending forces and their ability to breakout. Therefore, commanders and staff of a major operation vigilantly avoid isolation when Army forces are defending urban areas in their AO.

Separating Attacking Forces from Supporting Resources

7-36. Commanders of the major operation primarily use fires and IO for separating in space and time threat forces attacking the urban area from echelons and resources in support. The purpose of this shaping action is the same as for any conventional area defense. It aims to allow the defending forces to defeat the threat piecemeal as they arrive in the urban area without support and already disrupted by deep fires and IO against information systems. This separation and disruption of the threat also sets the conditions for a mobile defense if commanders choose to execute that type of defense. These operations also prevent the threat commander from synchronizing and massing his combat power at the decisive point in the close battle.

7-37. If the urban area is part of a major mobile defense operation, the urban defense becomes the fixing force. Commanders shape the defense to encourage the threat to attack into the urban area. They lure the threat using a combination of techniques depending on the situation. They may make the urban area appear only lightly defended while other alternative courses of action appear strongly defended by friendly forces. Placing the bulk of the defending forces in concealed positions well within the urban area and positioning security forces on the periphery of the urban area portray a weak defense. In other situations, the opposite is true. If the urban area is an important objective to the threat, friendly forces can make the urban area appear heavily defended, thus ensuring that he commits sufficient combat power to the urban area to overwhelm the defense. Both cases have the same objective: to cause a major commitment of threat forces in the urban area. Once this commitment is made, the mobile defense striking force attacks and defeats the threat outside the urban area. This isolates the threat in the urban area and facilitates its destruction.

7-38. In the urban tactical battle, many shaping actions mirror those in all defensive operations. The size and complexity of the urban area prevents defending forces from being strong everywhere; shaping operations designed to engage the threat on terms advantageous to the defense have particular importance. Shaping actions include reconnaissance and security operations, passages of lines, and movement of reserve forces prior to their commitment. In addition, shaping operations critical to urban defense include mobility and countermobility operations, offensive IO, economy of force operations, and population management operations.

Creating a Mobility Advantage

7-39. In urban terrain, countermobility operations can greatly influence bringing the threat into the engagement areas of defending forces. Countermobility operations—based on understanding the urban transportation system, design, and construction characteristics—can be unusually effective (see Chapter 2). Demolitions can have important implications for creating impassable obstacles in urban canyons as well as for clearing fields of fire where necessary. Careful engineer planning can make the already constrictive terrain virtually impassable to mounted forces where appropriate, thus denying the threat combined arms capabilities. Countermobility operations in urban terrain drastically increase the defense's ability to shape the attacker's approach and to increase the combat power ratios in favor of the defense. As

with all aspects of UO, countermobility considers collateral damage and the second- and third-order effects of obstacle construction.

7-40. Well-conceived mobility operations in urban terrain can provide defending forces mobility superiority over attacking forces. This is achieved by carefully selecting routes between primary, alternate, and subsequent positions, and for moving reserves and counterattack forces. These routes are reconnoitered, cleared, and marked before the operation. They maximize the cover and concealment characteristics of the terrain. Using demolitions, lanes, and innovative obstacles denies the defense of these same routes.

Applying Economy of Force Measures

7-41. Economy of force is extremely important to effective tactical urban defense. A megalopolis is too large and too easily accessible for defending forces to be strong everywhere. Forces used effectively in an economy of force role enable the defending force to mass effects at decisive points. Forces used in an economy of force role execute security missions and take advantage of obstacles, mobility, and firepower to portray greater combat power than they actually possess. They prevent the threat from determining the actual disposition and strength of the friendly defense. If, contrary to expectations, they are strongly attacked, their mobility—stemming from a mounted maneuver capability, planning, and an intimate knowledge of the terrain—allows them to delay until reserves can meet the threat. Security forces in an economy of force role take position in parts of the urban area where the threat is less likely to attack.

Defensive Combat Power
Suez – October 1973

At the end of October, the Israeli Army was in the midst of effective counterattack against the Egyptian Army. The Israelis had success attacking west across the Suez Canal. Their armored divisions were attempting to achieve several objectives, to include destroying Egyptian air defense sites and completing the encirclement of the Egyptian 3rd Army, which was trapped on the canal's east side.

To completely encircle the Egyptian 3rd Army, the Israelis had to seize all possible crossing sites to it from the canal's west bank and the Red Sea. Also, as international negotiations towards a cease-fire progressed, the Israeli government wanted to capture as much Egyptian territory as possible to improve their negotiating position after hostilities.

Consequently, the Israeli Adan Armored Division was tasked to seize the Egyptian Red Sea port of Suez on the morning of 24 October. A cease-fire was to begin at 0700, and the Israeli intent was to be decisively engaged in the city by that time and then consolidate their position as part of the cease-fire compliance.

The Adan Division plan to seize Suez was a two-part operation. Each of the division's armored brigades would have a role. The 460th Brigade would attack west of the city and complete the city's encirclement. Simultaneously, the 217th Brigade would attack in columns of battalions through the city to seize three key intersections in the city. This was in accordance with standard Israeli armored doctrine for fighting in an urban area. The 217th Brigade would seize its

objectives through speed, firepower, and shock action. Once the objectives were seized, infantry and armored teams would continue attacking from the secured objectives to mop up and destroy pockets of resistance. The Israeli commanders expected to demoralize the defending Egyptians—two infantry battalions and one antitank company—by this rapid attack. The armored division commander was specifically advised by his commander to avoid a "Stalingrad" situation.

The attack got off to an ominous beginning as mist greatly inhibited a scheduled aerial bombardment in support of the attack. The 217th Brigade began its attack without infantry support and was quickly stopped by antitank missiles and antitank fire. Infantry was quickly integrated into the brigade and the attack resumed.

At the first objective, the Israelis encountered their first problems. A withering barrage of small arms, antitank missiles, and antitank fire hit the lead tank battalion, including direct fire from SU-23 anti-aircraft guns. Virtually all the officers and tank commanders in the tank battalion were killed or wounded, and several tanks were destroyed. Disabled vehicles blocked portions of the road, and vehicles that turned on to secondary roads were ambushed and destroyed. The battalion, however, successfully fought its way through the first brigade objective and on to the final brigade objective.

Hastily attached paratroop infantry in company strength were next in column following the tanks. They were traveling in buses and trucks. As the lead tank battalion took fire, the paratroopers dismounted, and attempted to secure adjacent buildings. The tank battalion's action of fighting through the objective caused the paratroopers to mount up and also attempt to move through the objective. Because of their soft skinned vehicles the paratroopers were unable to remain mounted and again dismounted, assaulted, and secured several buildings that they could defend. Once inside the buildings, the paratroopers found themselves cut off, pinned down, and unable to evacuate their considerable casualties, which included the battalion commander. The paratroopers were on the initial brigade objective but were unable to maneuver and were taking casualties.

A second paratroop company also dismounted and quickly became stalled in house-to-house fighting. The brigade reconnaissance company in M113 personnel carriers brought up the rear of the brigade column and lost several vehicles and was also unable to advance.

By 1100 the Israeli attack culminated. Elements of the 217th Brigade were on all three of the brigade's objectives in the city. However, the armored battalion, which had achieved the deepest penetration, was without infantry support and under severe antitank fire. Both paratroop companies were isolated and pinned down. In addition, an attempt to link up with the paratroopers had failed. At the same time, the civilian population of the city began to react. They erected impromptu barriers, ambushed isolated Israeli troops, and carried supplies and information to Egyptian forces.

The Israeli division commander ordered the brigade to break contact and fight its way out of the city. The armored battalion was able to fight its way out in daylight. The paratroop companies were forced to wait until darkness and then infiltrated out of the city carrying their wounded with them. Israeli casualties totaled 88 killed and hundreds wounded in addition to 28 combat vehicles destroyed. Egyptian casualties were unknown but not believed to be significant.

The fight for Suez effectively demonstrates numerous urban defensive techniques. It also vividly demonstrates the significant effect on defensive combat power of the urban environment.

The Egyptian defense demonstrates how the compartmented urban terrain restricts the mobility and the massing of firepower of armored forces. Trapped in column on the road, the Israelis were unable to mass fire on particular targets nor effectively synchronize and coordinate their fires. The short-range engagement, also a characteristic of urban combat, reduced the Israeli armor protection and eliminated the Israeli armor's ability to keep out of small arms range. Thus, hand held antiarmor weapons were more effective in an urban area. Additionally, Egyptian small arms and sniper fire critically affected Israeli C2 by successfully targeting leaders.

The Egyptian defenders effectively isolated the mounted Israelis by defending and planning engagement areas in depth. The Egyptians synchronized so that they engaged the entire Israeli force simultaneously. This forced the Israelis to fight in multiple directions. It also separated the Israeli infantry from the armor and prevented the formation of combined arms teams necessary for effective urban offensive operations.

Suez also demonstrated how civilians come to the advantage of the defense. After the battle was joined, the population—by threatening isolated pockets of Israelis and building barricades—helped prevent the Israelis from reorganizing while in contact and hindered the Israelis breaking contact. The population was also a valuable source of intelligence for the Egyptians and precluded covert Israeli movement in daytime.

Suez shows the ability of a well-placed defense in depth to fix a superior force in an urban area. Despite the Israeli commander's caution to avoid a "Stalingrad," the Israeli division, brigade, and battalion commanders were quickly trapped and unable to easily break contact. Even a successful defense on the parameter of the city would not have been nearly as effective, as the Israelis would have easily broken contact once the strength of the defense was recognized.

Another key to the success of the Egyptian defense was the Israelis' inadequate reconnaissance. While the Israelis knew the approximate size of the defending forces, they had no idea of the Egyptian dispositions. In this case, time prevented adequate reconnaissance. Key to a successful defense is adequate security to obscure defense dispositions, which permits surprise and shock effect.

The Suez defense was a decisive defeat of elite Israeli forces by regular infantry units inferior in training, morale, and numbers. Total disaster was averted only because of the professionalism of the Israeli armored forces and paratroopers that permitted them to continue to fight and eventually exfiltrate the urban trap. The Israeli forces thus escaped total destruction. Suez strongly demonstrates how the enhancing effects of the urban environment on defensive combat power are significant enough to permit inferior regular forces to defeat elite formations. Since the 1973 Suez battle, US forces in Mogadishu, Somalia, and Russian forces in Grozny, Chechnya have faced similar urban defensive ambushes.

Effectively Managing the Urban Population

7-42. Another way to shape the urban defensive battle is population management. In most cases, defending force commanders are in the urban area before combat. This time gives them the chance to manage civilians. Consequently, they can better manage and protect the population (a legal requirement) and gain more freedom of action for his forces.

7-43. Managing the civilians during the defense is a function of the size, disposition, and needs of the population and the resources available to the commander. Requesting higher support or coordinating with nongovernmental organizations, private voluntary organizations, and the local civil leadership for support may make up shortages of resources. Resources devoted to population management are carefully weighed against availability, military mission requirements, and possible collateral damage affecting tactical, operational, or strategic success. It may prove impractical to evacuate an urban area's population; still, commanders attempt to create and move most civilians to protected areas. Moving the population allows defending forces to more liberally apply fires, emplace obstacles, and relieve combat units and support units of requirements to continue life support for civilians while executing combat operations. Overall, effective civil-military operations can turn a friendly (or a neutral) population into an effective force multiplier providing support to every battlefield operating system.

Planning Counterattacks

7-44. Counterattacks are also an important tool in shaping the battlefield for defensive success. Counterattacks as a shaping tool have two applications: retaining the initiative and separating forces. However, opportunity for effective counterattacks will be brief and, therefore, timing will be critical. If conducted too soon, the counterattack may expend resources required later; if conducted too late, it may not be effective. Commanders understand the effect of the urban environment on time-distance relationships; otherwise, the timing of the attack may be upset and the operation desynchronized. Additionally, commanders develop plans beyond the counterattack to exploit potential success.

DOMINATE

7-45. Dominating the urban area in a defensive operation requires decisively defeating the threat's attacks. Defensive forces use the terrain to their advantage, employ precision supporting fires, and use direct fire from protected positions aligned against carefully selected avenues of approaches and kill zones. The combat power of the defense augmented by shaping actions and the characteristics of urban terrain force culmination of the threat attack. Like urban offensive operations, domination in urban defensive operations typically results from successful actions at the tactical level of war. These actions include—

- Performing aggressive ISR.
- Creating depth.
- Executing an effective obstacle plan.
- Conducting coordinated counterattacks.

prevent introducing new diseases (especially drug-resistant strains) into an urban area. A new disease may tax the medical system and introduce a new medical problem into an area already in crisis. Lastly, field sanitation training (to include training in the use of barrier protection such as latex gloves when rendering care to any person and animal, rodent, and pest control), equipment, and supplies are part of overall preventive medicine measures and considerations.

Combat Stress

9-58. Stress occurs in every operation and type of environment; some stress is beneficial but too much is harmful. Controlled combat stress can invoke positive, adaptive reactions such as loyalty, selflessness, and heroism. On the other hand, uncontrolled combat stress can result in negative, harmful behavior and combat stress casualties. Such behaviors and casualties—battle fatigue, misconduct stress behaviors, and post-traumatic stress disorder—can interfere with the unit's mission. Physical and mental factors leading to combat stress result from the environment and the deliberate enemy actions aimed at killing, wounding, or demoralizing soldiers. However, many stressors are also generated from the soldier's own leaders and mission demands.

Combat Stress
Chechnya – 1994 to 1996

Russia's 1994-1996 conflict with Chechnya, a republic in the southwestern part of the Russian Federation, produced an increased number of psychological trauma and combat stress casualties. One medical survey found 72 percent of the soldiers screened had some sort of psychological disorder symptoms. Of that, 46 percent exhibited asthenic depression (a weak, apathetic, or retarded motor state). The other 26 percent exhibited psychotic reactions such as high states of anxiety, excitement, or aggressiveness and a deterioration of moral values or interpersonal relations. The statistics showed more troops experienced combat stress disorders than during their 1980s war in Afghanistan. One primary difference was that in Chechnya, Russian forces conducted combat mostly in cities rather than in mountains, valleys, and other rural areas.

Combat always invokes fear in soldiers. However, poor training and planning, uncertainty in their cause, and urban populations that resented their presence exacerbated the psychological climate for the Russian forces in Chechnya. Acts of subversion and terrorism by Chechen guerrillas kept the Russians in a constant, high state of readiness and anxiety; the soldiers viewed every civilian—young or old, male or female—as a potential enemy. This psychological pressure was not simply a by-product, but an objective of information operations and a prime reason for taking the fight into the close confines of Chechnya's urban areas. Torture and mutilation of prisoners; immediate execution of captured pilots; imitative electromagnetic deception (Chechens mimicked Russian radio transmissions and directed Russian close air support against their own forces); and propaganda to convince civilians that Russia's actions had a religious bias against Muslims and Islam were conducted to exert intense, unremitting psychological pressure on Russian forces—with great success.

Appendix A

Siege of Beirut: An Illustration of the Fundamentals of Urban Operations

The IDF had neither the strategy nor the experience nor the configuration of forces to fight and sustain a house-to-house campaign in Beirut.

Richard A. Gabriel
Operation Peace for Galilee: The Israeli-PLO War in Lebanon

OVERALL STRATEGIC SITUATION

A-1. In 1982, Israel launched OPERATION PEACE FOR GALILEE designed to destroy the Palestine Liberation Organization (PLO) presence in southern Lebanon. On 1 June, Israeli Defense Forces (IDF) launched a massive assault across the border into southern Lebanon. The Israeli attack focused on the PLO, but the operations quickly involved major ground and air combat between Israel and Syrian forces.

A-2. In the first few weeks, Israeli forces quickly pushed back both the Syrians and the PLO. However, except for some PLO forces isolated in bypassed urban areas, such as Tyre and Sidon, most of the PLO fell back into Beirut (see Figure A-1). By 30 June, Israeli forces had reached the outskirts of southern Beirut, occupied East Beirut, isolated the city from Syria and the rest of Lebanon, and blockaded the sea approaches to the city. Even so, with most of the PLO intact inside and with significant military and political capability, the Israelis had yet to achieve the objective of OPERATION PEACE FOR GALILEE. The Israeli command had to make a decision. It had three choices: permit the PLO to operate in Beirut; execute a potentially costly assault of the PLO in the city; or lay siege to the city and use the siege to successfully achieve the objective. The Israelis opted for the latter.

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ISRAELI MILITARY POSITION

A-3. The Israelis had an excellent position around Beirut. They occupied high ground to the south and west, virtually dominating the entire city. Israeli naval forces controlled the seaward approaches to Beirut. The Israelis' position was also strong defensively, capable of defeating any attempt to break out of or into the city from northern Lebanon or Syria. The Israeli air force had total and complete air superiority. The Israelis controlled the water, fuel, and food sources of West Beirut. Although the PLO forces had stockpiles of food and supplies, the Israelis regulated the food, water, and generating power for the civil population.

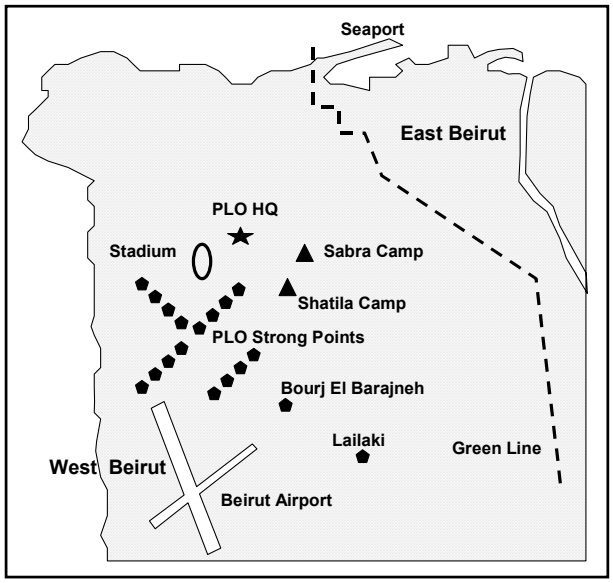

Figure A-1. The City of Beirut

A-4. Despite the superior positioning of Israeli forces, the IDF faced significant challenges to include the combat power of the PLO, Syria, and other threats in Beirut. Israeli doctrine and training did not emphasize urban operations. Additionally, Israel was constrained by its desire to limit collateral damage and friendly and noncombatant casualties. Organizationally, the Israeli army was not optimized to fight in urban terrain. Armor and self-propelled artillery formations dominated the Israeli forces, and most Israeli infantry was mechanized. The Israeli forces had only a few elite formations of traditional dismounted infantry.

PLO MILITARY POSITION

A-5. Despite being surrounded and cut off from support, the PLO position in Beirut offered numerous advantages in addition to the characteristic advantages of urban defense. The PLO had long anticipated an Israeli invasion of southern Lebanon; it had had months to prepare bunkers, obstacles, and the defensive plan of Beirut and other urban areas. Approximately 14,000 Arab combatants in West Beirut readied to withstand the Israeli siege. This was done with the advice of Soviet, Syrian, and east European advisors. The preparation included stockpiling essential supplies in quantities sufficient to withstand a six-month siege. Also, the PLO fighters integrated into the civil populations of the urban areas. Often their families lived with them. The civil population itself was friendly and provided both information and concealment for PLO forces. PLO fighters were experienced in urban combat and knew the urban terrain intimately. PLO forces had been involved in urban fighting against Syrian conventional forces and Christian militias in Beirut several years prior to the Israeli invasion. Finally, the organization of the PLO—

centered on small teams of fighters armed with machine-guns and antitank weapons, and trained in insurgent, hit-and-run tactics—was ideally suited to take maximum advantage of the urban environment.

ROLE OF CIVILIANS

A-6. Various ethnic and religious groups make up the civil population of southern Lebanon. However, West Beirut's population was heavily Palestinian and Lebanese. The civil population of West Beirut was between 350,000 and 500,000. The Palestinian population supported the PLO. The Lebanese population may be described as friendly neutral to the Israelis. Although unhappy under Palestinian dominance, this population was unwilling to actively support Israel. The civilian population was a logistic constraint on the PLO, which would have become significant had the siege lasted longer. The civilians in West Beirut were an even larger constraint on the Israelis. The presence of civilians significantly limited the ability of the Israelis to employ firepower. However, the Palestine refugee camps located in West Beirut were both civilian centers and military bases. The Israeli constraints on artillery and other systems against these parts of the city were much less restrictive than in other parts of West Beirut where the population was mostly Lebanese and where fewer key military targets existed.

A-7. The PLO knew of the Israeli aversion to causing civil casualties and purposely located key military centers, troop concentrations, and logistics and weapons systems in and amongst the population—particularly the refugee Palestinian population in the southern part of West Beirut. Tactically, they used the civilians to hide their forces and infiltrate Israeli positions.

A-8. The friendly Palestinian population provided intelligence to the PLO while the friendly Lebanese population provided intelligence for the IDF. Throughout the siege, the IDF maintained a policy of free passage out of Beirut for all civilians. This policy was strictly enforced and permitted no weapons to leave the city. Some estimates are that as many as 100,000 refugees took advantage of this policy.

INFORMATION OPERATIONS

A-9. The siege of Beirut involved using information operations (IO) to influence the media. PLO information operations were aimed at controlling the media and hence the international perception of the operation. This was done by carefully cultivating a select group of pro-PLO media years before hostilities even began. Once hostilities started, only these media sources were permitted to report from the besieged portions of the city, and they were only shown activities that portrayed the IDF negatively. The IDF did not vigorously counter the PLO plan. In fact, the IDF contributed to it by limiting media access to their activities. The PLO information operations had a successful impact. The international community was constantly pressuring the Israeli government to end hostilities. This put pressure on the IDF to conduct operations rapidly and to limit firepower and casualties.

CONDUCT OF THE URBAN OPERATIONS

A-10. The siege of Beirut began 1 July (see Figure A-2). By 4 July, Israeli forces occupied East Beirut, the Green Line separating East and West Beirut, and dominating positions south of the airport. IDF naval forces also controlled the sea west and north of Beirut. On 3 and 4 July, IDF artillery and naval fire began a regular campaign of firing on military targets throughout West Beirut. On 4 July, the IDF cut power and water to the city.

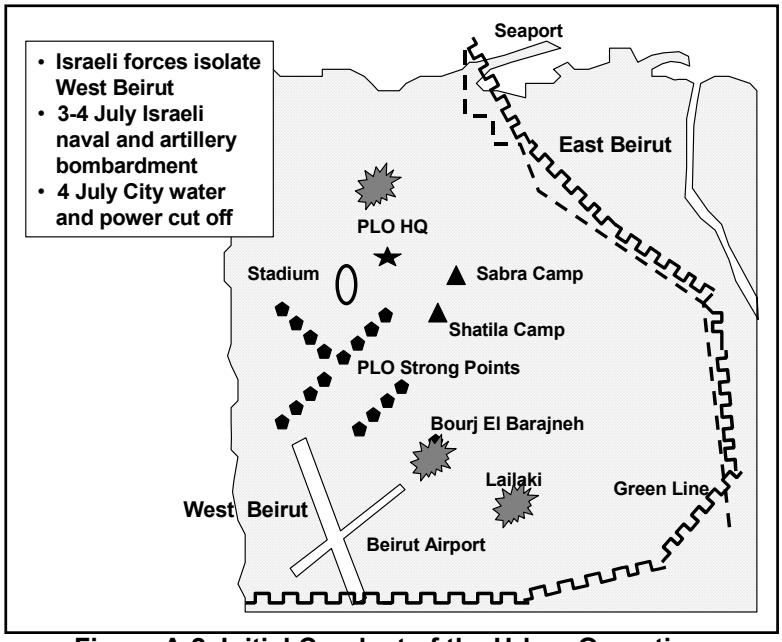

Figure A-2. Initial Conduct of the Urban Operation

A-11. From 5 to 13 July, the Israeli fires continued to pound PLO targets in West Beirut. The PLO gave one significant response, firing on an Israeli position south of the city and causing several casualties. On 7 July, reacting to international pressure, the IDF returned power and water to West Beirut's civil population. On 11 July, the IDF launched its first attack, probing the southern portion of the airport with an armored task force (see Figure A-3). The PLO repulsed this attack and destroyed several IDF armored vehicles.

A-12. On 13 July, both sides entered into a cease-fire that lasted until 21 July. They began negotiations, mediated by international community, to end the siege. The PLO used this period to continue to fortify Beirut. The Israelis used the time to train their infantry and other arms in urban small unit tactics in Damour, a town the Israeli paratroopers had captured.

A-13. The cease-fire ended on 21 July as PLO forces launched three attacks on IDF rear areas. The Israelis responded with renewed and even more vigorous artillery, naval, and air bombardment of PLO positions in the city. The IDF attacks went on without respite until 30 July. On 28 July, the IDF renewed its ground attack in the south around the airport (see Figure A-4). This time IDF forces methodically advanced and captured a few hundred meters of ground establishing a toehold.

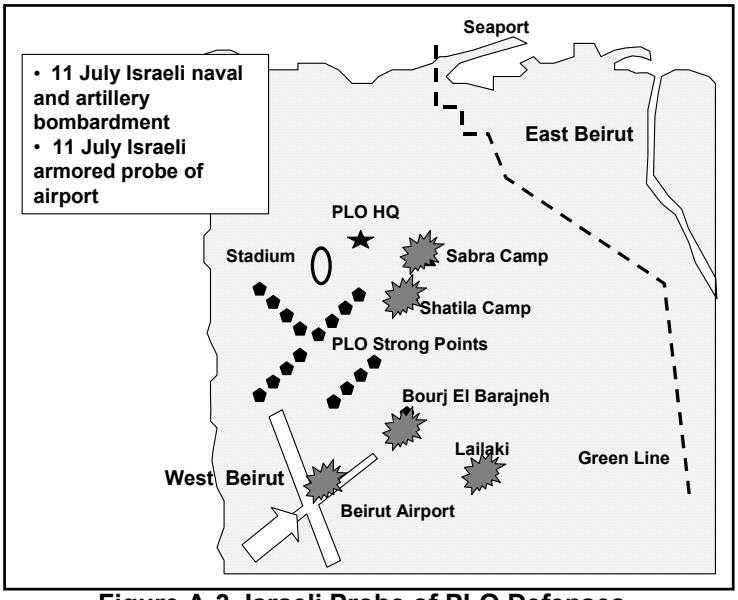

Figure A-3. Israeli Probe of PLO Defenses

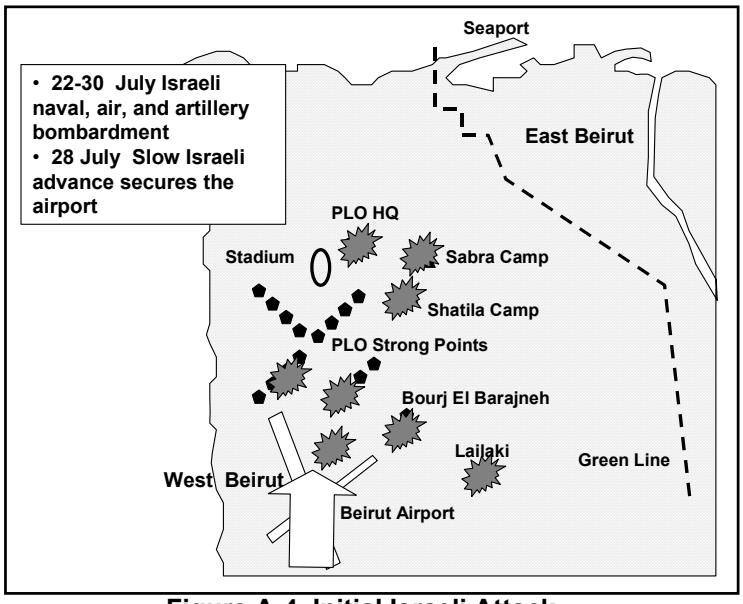

Figure A-4. Initial Israeli Attack

A-14. The Israeli bombardment stopped On 31 July. However, on 1 August the IDF launched its first major ground attack, successfully seizing Beirut airport in the south (see Figure A-5 on page A-6). Israeli armored forces began massing on 2 August along the green line, simultaneously continuing the attack from the south to the outskirts of the Palestinian positions at Ouzai. On 3 August, the Israeli forces continued to reinforce both their southern attack forces and forces along the green line to prepare for continuing offensive operations. On 4 August, the IDF attacked at four different places. This was the much-anticipated major Israeli offensive.

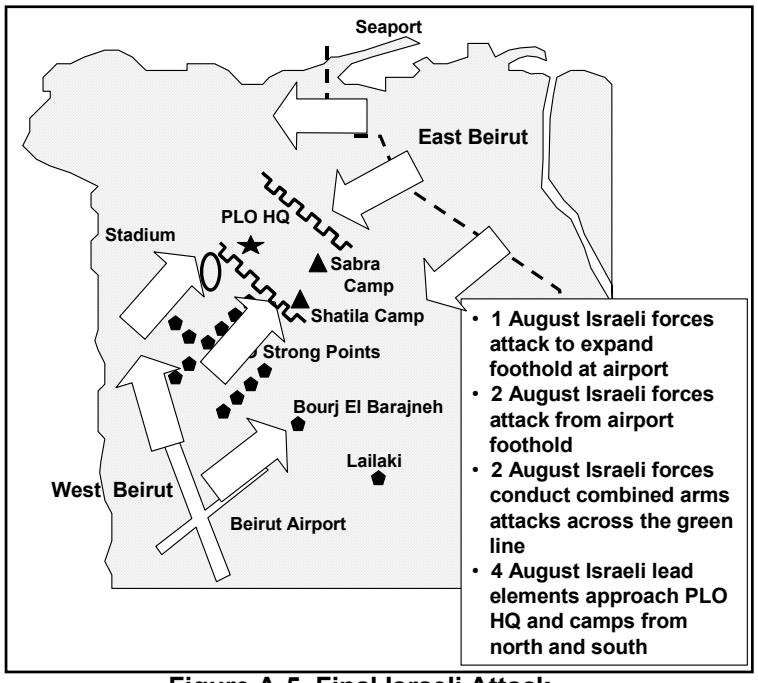
Seaport
East Beirut
PLO HQ
Stadium
Sabra
Camp
Shatila Camp
Strong Points
Bourj El Barajneh
Lailaki
West Beirut
Beirut Airport
• 1 August Israeli forces attack to expand foothold at airport
• 2 August Israeli forces attack from airport foothold
• 2 August Israeli forces conduct combined arms attacks across the green line
• 4 August Israeli lead elements approach PLO HQ and camps from north and south

Figure A-5. Final Israeli Attack

A-15. The Israeli attack successfully disrupted the coherence of the PLO defense. The southern attack was the most successful: it pushed PLO forces back to their camps of Sabra and Shatila and threatened to overrun PLO headquarters. Along the green line the IDF attacked across three crossing points. All three attacks made modest gains against stiff resistance. For this day's offensive, the Israelis suffered 19 killed and 84 wounded, the highest single day total of the siege, bringing the total to 318 killed. Following the major attacks on 4 August, Israeli forces paused and, for four days, consolidated their gains and prepared to renew the offensive. Skirmishes and sniping continued, but without significant offensive action. On 9 August, the IDF renewed air and artillery attacks for four days. This activity culminated on 12 August with a massive aerial attack that killed over a hundred and wounded over 400—mostly civilians. A cease-fire started the next day and lasted until the PLO evacuated Beirut on 22 August.

LESSONS

A-16. The Israeli siege of West Beirut was both a military and a political victory. However, the issue was in doubt until the last week of the siege. Military victory was never in question; the issue in doubt was whether the Israeli government could sustain military operations politically in the face of international and domestic opposition. On the other side, the PLO faced whether they could last militarily until a favorable political end could be negotiated. The answer was that the PLO's military situation became untenable before the Israeli political situation did.

A-17. This favorable military and political outcome stemmed from the careful balance of applying military force with political negotiation. The Israelis also

balanced the type of tactics they employed against the domestic aversion to major friendly casualties and international concern with collateral damage.

PERFORM FOCUSED INFORMATION OPERATIONS

A-18. The PLO devoted considerable resources and much planning on how to use IO to their best advantage. They chose to focus on media information sources as a means of influencing international and domestic opinion.

A-19. The PLO's carefully orchestrated misinformation and control of the media manipulated international sentiment. The major goal of this effort was to grossly exaggerate the claims of civilian casualties, damage, and number of refugees—and this was successfully accomplished. Actual casualties among the civilians were likely half of what the press reported during the battle. The failure of the IDF to present a believable and accurate account of operations to balance PLO efforts put tremendous pressure on the Israeli government to break off the siege. It was the PLO's primary hope for political victory.

A-20. In contrast to the weak performance in IO, the IDF excelled in psychological operations. IDF psychological operations attacked the morale of the PLO fighter and the Palestinian population. They were designed to wear down the will of the PLO to fight while convincing the PLO that the IDF would go to any extreme to win. Thus defeat was inevitable. The IDF used passive measures, such as leaflet drops and loudspeaker broadcasts. They used naval bombardment to emphasize the totality of the isolation of Beirut. To maintain high levels of stress, to deny sleep, and to emphasize their combat power, the IDF used constant naval, air, and artillery bombardment. They even employed sonic booms from low-flying aircraft to emphasize the IDF's dominance. These efforts helped to convince the PLO that the only alternative to negotiation on Israeli terms was complete destruction.

CONDUCT CLOSE COMBAT

A-21. The ground combat during the siege of Beirut demonstrated that the lessons of tactical ground combat learned in the latter half of the twentieth century were still valid. A small combined arms team built around infantry, but including armor and engineers, was the key to successful tactical combat. Artillery firing in direct fire support of infantry worked effectively as did the Vulcan air defense system. The Israeli tactical plan was sound. The Israelis attacked from multiple directions, segmented West Beirut into pieces, and then destroyed each individually. The plan's success strongly influenced the PLO willingness to negotiate. Tactical patience based on steady though slow progress toward decisive points limited both friendly and noncombatant casualties. In this case, the decisive points were PLO camps, strong points, and the PLO headquarters.

A-22. The willingness to execute close combat demonstrated throughout the siege, but especially in the attacks of 4 August, was decisive. Decisive ground combat was used sparingly, was successful and aimed at decisive points, and was timed carefully to impact on achieving the political objectives in negotiations. The PLO had hoped that their elaborate defensive preparations would have made Israeli assaults so costly as to convince the Israelis not to attack. That the Israelis could successfully attack the urban area convinced the PLO

leadership that destruction of their forces was inevitable. For this reason they negotiated a cease-fire and a withdrawal on Israeli terms.

AVOID THE ATTRITION APPROACH

A-23. The Israelis carefully focused their attacks on objects that were decisive and would have the greatest impact on the PLO: the known PLO headquarters and refugee centers. Other areas of West Beirut were essentially ignored. For example, the significant Syrian forces in West Beirut were not the focus of Israeli attention even though they had significant combat power. This allowed the Israelis to focus their combat power on the PLO and limit both friendly casualties and collateral damage.

CONTROL THE ESSENTIAL AND PRESERVE CRITICAL INFRASTRUCTURE

A-24. The Israeli siege assured Israeli control of the essential infrastructure of Beirut. The initial Israeli actions secured East Beirut and the city's water, power, and food supplies. The Israelis also dominated Beirut's international airport, closed all the sea access, and controlled all routes into and out of the city. They controlled and preserved all that was critical to operating the city and this put them in a commanding position when negotiating with the PLO.

MINIMIZE COLLATERAL DAMAGE

A-25. The Israeli army took extraordinary steps to limit collateral damage, preserve critical infrastructure, and put in place stringent rules of engagement (ROE). They avoided randomly using grenades in house clearing, limited the use of massed artillery fires, and maximized the use of precision weapons. With this effort, the Israelis extensively used Maverick missiles because of their precise laser guidance and small warheads.

A-26. The strict ROE, however, conflicted with operational guidance that mandated that Israeli commanders minimize their own casualties and adhere to a rapid timetable. The nature of the environment made fighting slow. The concern for civilian casualties and damage to infrastructure declined as IDF casualties rose. They began to bring more field artillery to bear on Palestinian strong points and increasingly employed close air support. This tension underscores the delicate balance that Army commanders will face between minimizing collateral damage and protecting infrastructure while accomplishing the military objective with the least expenditure of resources—particularly soldiers. ROE is but one tool among many that a commander may employ to adhere to this UO fundamental.

UNDERSTAND THE HUMAN DIMENSION

A-27. The Israelis had a noteworthy (although imperfect and at times flawed) ability to understand the human dimension during their operations against the PLO in Beirut. This was the result of two circumstances. First, the PLO was a threat with which the Israeli forces were familiar after literally decades of conflict. Second, through a close alliance and cooperation with Lebanese militia, the Israelis understood a great deal regarding the attitudes and disposition of the civil population both within and outside Beirut.

SEPARATE NONCOMBATANTS FROM COMBATANTS

A-28. Separating combatants from noncombatants was a difficult but important aspect of the Beirut operation. The Israelis made every effort to positively identify the military nature of all targets. They also operated a free passage system that permitted the passage of all civilians out of the city through Israeli lines. The need to impose cease-fires and open lanes for civilians to escape the fighting slowed IDF operations considerably. Additionally, Israeli assumptions that civilians in urban combat zones would abandon areas where fighting was taking place were incorrect. In many cases, civilians would try to stay in their homes, leaving only after the battle had begun. In contrast, the PLO tied their military operations closely to the civilian community to make targeting difficult. They also abstained from donning uniforms to make individual targeting difficult.

A-29. Earlier in OPERATION PEACE FOR GALILEE when the IDF attacked PLO forces located in Tyre, Israeli psychological operations convinced 30,000 Lebanese noncombatants to abandon their homes and move to beach locations outside the city. However, the IDF was subsequently unable to provide food, water, clothing, shelter, and sanitation for these displaced civilians. IDF commanders compounded the situation by interfering with the efforts by outside relief agencies to aid the displaced population (for fear that the PLO would somehow benefit). Predictably, many civilians tried to return to the city complicating IDF maneuver and targeting—that which the separation was designed to avoid. IDF commanders learned that, while separation is important, they must also adequately plan and prepare for the subsequent control, health, and welfare of the noncombatants they displace.

RESTORE ESSENTIAL SERVICES

A-30. Since essential services were under Israeli command, and had been since the beginning of the siege, the Israelis had the ability to easily restore these resources to West Beirut as soon as they adopted the cease-fire.

TRANSITION CONTROL

A-31. In the rear areas of the Israeli siege positions, the Israeli army immediately handed over civic and police responsibility to civil authorities. This policy of rapid transition to civil control within Israeli lines elevated the requirement for the Israeli army to act as an army of occupation. The Israeli army believed the efficient administration of local government and police and the resulting good will of the population more than compensated for the slightly increased force protection issues and the increased risk of PLO infiltration.

A-32. Upon the cease-fire agreement, Israeli forces withdrew to predetermined positions. International forces under UN control supervised the evacuation of the PLO and Syrian forces from Beirut. These actions were executed according to a meticulous plan developed by the Israeli negotiators and agreed to by the PLO. Israeli forces did not take over and occupy Beirut as a result of the 1982 siege (an occupation did occur later but as a result of changing situations).

SUMMARY

A-33. The Israeli siege of West Beirut demonstrates many of the most demanding challenges of urban combat. In summary, the IDF's successful siege of Beirut emerged from their clearly understanding national strategic objectives and closely coordinating diplomatic efforts with urban military operations. A key part of that synchronization of capabilities was the understanding that the efforts of IDF would be enhanced if they left any escape option open to the PLO. This way out was the PLO's supervised evacuation that occurred after the siege. Although the PLO was not physically destroyed, the evacuation without arms and to different host countries effectively shattered the PLO's military capability. Had Israel insisted on the physical destruction of the PLO in Beirut, it might have failed because that goal may not have been politically obtainable in view of the costs in casualties, collateral damage, and international opinion.

Forms and Functions

- Cores
- Industrial areas
  - Toxic industrial material production and storage facilities
  - Standard signs and markings for toxic chemicals
- Outlying high-rise areas
- Residential areas and shantytowns
- Commercial ribbon areas
- Forts and military bases

Broad Urban Patterns

- Types
  - Satellite
  - Network
  - Linear
  - Segment
- Dominant or central hub (if any)
- Area covered (square miles)

Street Patterns

- Basic Types
  - Radial
  - Grid
  - Irregular (planned and unplanned)
- Variations
  - Rayed
  - Radial-Ring
  - Contour-forming
  - Combined
- Widths

Construction and Placement

- Construction
  - Mass or framed
  - Light or heavy clad
  - Material (dirt, wood, stone, brick, cinder block, concrete, steel, and glass)
  - Density and thickness (roofs, floors, and interior and exterior walls)
  - Load bearing walls and columns
  - Height (floors)
  - Doors, windows, fire escapes, and other openings
  - Interior floor plan (including crawl spaces, elevators, and stairs)
- Placement
  - Random
  - Close-orderly block
  - Dispersed
- Ownership

Military Aspects of Terrain: OAKOC

- Observation and fields of fire
  - Smoke (fire), dust (explosions), and flying debris
  - Rubble
  - Engagement ranges (including minimum safe distances and backblast factors) and obliquity/angle (ricochets)
  - Elevation and depression considerations
  - Lasers and reflective concerns
- Avenues of approach (mobility corridors)
  - Airspace
  - Surface
  - Supersurface (intrasurface)
  - Subsurface
- Key terrain
  - Landmarks
  - Buildings of significant cultural, social, political, or economic significance
- Obstacles
  - Rubble and vehicles
  - Masking of fires
  - Burning buildings or other fire hazards
  - Rivers and lakes
- Cover and concealment
  - Building protection
  - Weapon penetration (single shot and multiple rounds) considerations
  - Rubble and vehicles

Figure B-3. Significant Urban Terrain Characteristics

B-14. **Natural Terrain.** The natural terrain features beyond the urban area and beneath urban structures significantly influence unit operations. They dictate where buildings can be constructed, the slope and pattern of streets, and even the broad urban patterns that develop over longer periods of time, thereby influencing a unit's scheme of maneuver. The military aspects of terrain—observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment (OAKOC)—remain critical to the analysis of natural terrain in, under, and around urban areas. Fortunately, commanders and their staffs are accustomed to this type of analysis.

Analysis of an Urban Area's Underlying Terrain Mitrovica, Kosovo

An urban area's underlying terrain provides many clues into its history, economy, society, and current situation. Mitrovica, Kosovo is an illustrative example. The Ibar River creates a natural line of communications through the middle of the city as well as an obstacle that bisects the urban area. This bisection naturally

support the overall urban operation with the level of detail that commanders and their staffs can achieve. However, an IPB that fails to devote enough time and resources to societal analysis can find large elements of the population turned against the Army force. Analyzing the urban society first may help to focus or limit further analysis of the terrain and infrastructure, saving time and ISR resources.

URBAN INFRASTRUCTURE

B-19. Functional and analytical overlap readily appears when examining urban infrastructures (see Figure B-5). They are composed of physical structures or facilities and people. Hence, much of the analysis conducted for terrain and society can apply when assessing the urban infrastructure. For example, commanders, staffs, and analysts could not effectively assess the urban economic and commercial infrastructure without simultaneously considering labor. All aspects of the society relate and can be used to further analyze the urban work force since they are a subelement of the urban society. Similarly, the OAKOC aspects used to evaluate terrain may also apply to the urban infrastructure, especially considerations of key terrain.

Transportation and Distribution

- Water
  - Shipyards and other port and harbor facilities
  - Inland waterways, canals, and locks
  - Offshore pipeline berths
  - Cargo storage and handling
  - Types and number of ships, boats, and ferries
  - Dams
- Streets and roads
  - Bridges and fords
  - Over- and underpasses
  - Raised embankments, tunnels, culverts, and other subterranean features (widths and clearances)
  - Parking areas (surface, subsurface, and supersurface)
  - Weight restrictions
  - Traffic light operations
  - Traffic patterns
  - Widths
  - Surface materials
- Rail
  - Lines
  - Terminals
  - Switchyards and junctions
  - Subways, bridges, elevated rail lines, and underpasses (clearances)
  - Track gauges
  - Types and number of rolling stock
  - Electrification
- Air
  - Airfields and runways (including capabilities)
  - Heliports and helipads (including rooftop)
  - Types and number of aircraft
  - Cargo storage and handling
- Trucking companies and delivery services
- Available material-handling equipment
- Rush hour and market time considerations
- Seasonal (weather) effects
- Rubble effects
- Impact of dislocated civilians and migration patterns
- Likely population congregation points
- Identifiable primary and alternate lines of communications

Economics and Commerce

- Industries
  - Types and Locations
  - Important companies (including US or allied)
  - Military production facilities
- Sources of raw materials
- Use of toxic industrial materials and biological agents
  - Agriculture (insecticides, herbicides, and fertilizers)
  - Manufacturing
  - Cleaning
  - Research
- Food types, quantities, and sources
  - Requirements and availability
  - Storage and processing
  - Cleanliness standards
- Stores, shops, restaurants, hotels, and strip malls
- Recreation facilities
  - Outdoor and amusement parks
  - Stadiums and other sports facilities
- Machine shops
- Brick and lumber yards
- Banking and investment institutions

Figure B-5. Significant Urban Infrastructure Characteristics

Administration and Human Services

- Police and fire protection
  - Headquarters, station, and key facilities locations
  - Organization and strengths
  - Equipment
  - Functions, authority, and jurisdictional boundaries
  - Contract guard services
- Welfare and public assistance
  - Monetary assistance
  - Orphanages
  - Elderly care facilities
- Water supply systems
  - Water sources and storage (lakes, reservoirs, cisterns, pools, and public baths)
  - Water treatment and quality
  - Pumping stations and other distribution methods (trucks, bottles)
  - Hydrant locations
- Snow removal capabilities
- Street light operations
- Health facilities
  - Hospitals
  - Emergency medical services
  - Mental institutions
  - Medical supplies and equipment
  - Research and pharmaceutical buildings
  - Blood banks
- Governmental buildings
  - Embassies
  - Capitol building
  - Legislative, judicial, and ministry buildings
  - Hall of records
- Cultural resources
  - Religious buildings (churches and mosques)
  - Shrines, monuments, and other historical structures
  - Schools, museums, theaters, and libraries
- Waste and sanitation
  - Types (solid, sewage, and toxic)
  - Collection, processing, and disposal
  - Dumps or landfills
  - Drainage systems
- Effects of military control measures on providing vital human services

Energy

- Types
  - Electric
  - Oil
  - Coal
  - Natural gas
  - Nuclear
  - Solar
  - Hydroelectric
  - Geothermal
- Facilities
  - Production and processing
  - Storage
- Distribution
  - Pipelines (above and below ground)
  - Power lines (overhead and underground)
  - Water, rail, and road
- Potential hazards

Communication and Information

- Print media
  - Newspapers, periodicals, and pamphlets
  - Billboards and posters
  - Postal facilities
- Telephone facilities
  - Wire or wireless
  - Facsimile machines
- Telegraph facilities
- Radio facilities
- Police, fire, and rescue systems
- Security systems
- Television facilities
- Computers and the Internet
- Antennas, towers, relay stations, and lines (surface and subsurface)
- Integration of space-based capabilities
- Public forums and speech
- Low-technology media (cars horns, drums, graffiti, and burning tires)
- Key media organizations and reporters
  - Local
  - International
  - US

Figure B-5. Significant Urban Infrastructure Characteristics (continued)

THREAT CONSIDERATIONS

B-20. Chapter 3 outlines the instability and uncertainty of the strategic environment. Commanders and staffs, and analysts identify and analyze the threat in steps three and four of the IPB process. They analyze the threat's composition, strength, disposition, leadership, training, morale, weapons and capabilities, vulnerabilities, internal logistics and external support, doctrine (if any), strategy or modus operandi, and tactics. The threat can take a variety of forms:

- Conventional military forces.
- Paramilitary forces.
- Guerrillas and insurgents.
- Terrorists.
- Militia or special police organizations.

MATRICES, DIAGRAMS, OR CHARTS

B-39. Matrices, diagrams, and charts help to identify key relationships among friendly and threat forces and other significant elements of the urban environment. These tools and products include—

- **Association Matrix (or Link Diagram).** The association matrix helps identify the nature and relationship between individuals and groups. Similarly, the link diagram graphically represents key relationships between population elements. These tools are critical for identifying common interests. A significant matrix may be a comparison of cultural perspectives—ideology, politics, religion, acceptable standards of living, and mores—between urban population groups and Army (and multinational) forces to help understand and accurately predict a civilian element's actions.
- **NGO Matrix.** Potentially a form of the association matrix, this matrix contains each NGO's location, capabilities, and relationships (with specific elements of the civilian population, threat and friendly forces, and other NGOs). (See the discussion of Participating Organizations and Agencies in Chapter 8.)
- **Media Analysis Matrix.** This conceptual tool can be used to evaluate each information medium (and the multiple elements within each). Such mediums can include radio, television, print, word of mouth, Internet, and graffiti with its effect on specific sectors of urban population (or larger audiences). This can assist in the perception analysis.
- **Population Capabilities and Dependencies Matrix.** This matrix is similar to the NGO matrix. It describes the capabilities and dependencies of the urban population elements. It is essential in identifying each element's role (threat or friendly) and influence. Depending on their location along the threat-friendly continuum, dependencies may be vulnerabilities that must be attacked or sustained and protected.
- **Pattern Analysis Plot Chart.** This chart depicts the times and dates of a selected activity (such as ambushes, bombings, and demonstrations) to search for patterns of activity for predictive purposes as well as to discern intent.

VARIOUS URBAN OVERLAYS

B-40. Staffs can produce various map overlays. These overlays depict physical locations of some aspect critical to the planning and conduct of the urban operation. NIMA can produce many overlays as an integrated map product (including satellite imagery). These overlays can include the—

- **Population Status Overlay.** This tool depicts the physical location of various groups identified by any significant social category such as religion or language. During offensive and defensive operations, it may simply be where significant numbers of people are "huddled" or located throughout the battlefield. Population dispersal can vary significantly through the day, particularly at night, and must be considered as part of the overall analysis leading to the development of this tool.
- **Forms and Functions Overlay.** Based on the urban model, this overlay depicts the urban core or central business district, industrial areas,

outlying high-rise areas, commercial ribbon areas, and residential areas, to include shantytowns.

- **Infrastructure Overlay.** This overlay is actually a series of overlays. It depicts identifiable subsystems in each form of urban infrastructure: communications and information, transportation and distribution, energy, economics and commerce, and administration and human services. Each subsystem can be broken down into more detail. Infrastructure data may be used to develop three other overlays—
  - **Critical Infrastructure Overlay.** This tool displays specific elements of the urban infrastructure that, if harmed, will adversely affect the living conditions of the urban society to the detriment of the mission. These elements may include power generation plants, water purification plants and pumping stations, and sewage treatment plants. This information could be coded as part of the overall infrastructure overlay.
  - **Lines of Communications (LOCs) Overlay.** The LOCs overlay highlights transportation systems and nodes, such as railways, road, trails, navigable waterways, airfields, and open areas for drop zones and landing zones. It also includes subsurface areas and routes such as sewage, drainage, and tunnels and considers movement between supersurface areas. The LOCs overlay and the route overlay (below) consider traffic conditions, times, and locations, to include potential points where significant portions of the urban population may congregate.
  - **Route Overlay.** This overlay emphasizes mobility information to assist commanders and planners in determining what forces and equipment can move along the urban area's mobility corridors. Pertinent data includes street names, patterns, and widths; bridge, underpass, and overpass locations; load capacities; potential sniper and ambush locations (which may be its own overlay); and key navigational landmarks. The structures over a specific height overlay and subsurface overlay may assist in its development. As with the LOCs overlay, commanders, planners, and analysts think in all dimensions.
- **Line of Sight or Intervisibility Overlay.** This product creates a profile view (optical or electronic) of the terrain from the observer's location to other locations or targets. It can show trajectory or flight-line masking as well as obstructed or unobstructed signal pathways.
- **Structures Over a Specific Height Overlay.** This level of detail may also be critical to communications, fires, and Army airspace command and control (air mobility corridors especially low-level flight profiles). Incorporated as part of this overlay, it may include floors or elevations above limitations for particular weapon systems at various distances from the structure.
- **Subsurface Area Overlay.** As an alternate to the building or structure height overlay, this product provides the locations of basements, underground parking garages, sewers, tunnels, subways, naturally occurring subterranean formations, and other subsurface areas. Similar to elevation "dead spaces," this overlay may show areas that exceed

depression capabilities of weapon systems and potential threat ambush locations—again, affecting maneuver options.

- **Urban Logistic Resources Overlay.** This product identifies the locations of urban logistic resources that may contribute to mission accomplishment. It may contain specific warehouse sites, hospitals and medical supply locations, viable food stores, building material locations, fuel storage areas, car or truck lots, maintenance garages, and appliance warehouses. (NGO locations, taken from the NGO matrix, may be an essential, overlapping element of this overlay.)
- **Hazardous Facilities Overlay.** This overlay identifies urban structures with known or suspected chemical, biological, or radiological features, such as nuclear power plants, fertilizer plants, oil refineries, pharmaceutical plants, and covert locations for producing weapons of mass destruction. These locations are critical to maneuver and fire planning.
- **Protected Target Overlay.** This overlay depicts terrain that should not be destroyed or attacked based on restrictions due to international, host-nation, or US law and subsequent rules of engagement. These may include schools, hospitals, historical or other culturally significant monuments, and religious sites. This overlay may incorporate no-fire areas, such as special operations forces locations, critical infrastructure, logistic sources, and hazardous sites that must be protected as part of the commander's concept of the operation.
- **Incident Overlay.** Similar to the pattern analysis plot chart, this product depicts the location of different threat actions and types of tactics employed to uncover recurring routines, schemes, methods, tactics, or techniques and overall threat interests, objectives, or the desired end state.

B-41. The above IPB tools and products constitute a small sampling of what staffs and analysts can produce. They are limited only by their imaginations and mission needs (not all tools presented above may be relevant or necessary to every operation). Many products can be combined into a single product or each can generate further products of increasing level of detail. This is similar to transparent overlays positioned one atop another on a map. Technology may allow for more urban data to be combined, compared, analyzed, displayed, and shared. The challenge remains to provide timely, accurate, complete, and relevant information in an understandable and usable form *without overloading the commander*.

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MOUNTAIN OPERATIONS

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HEADQUARTERS, DEPARTMENT OF THE ARMY

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impossible. In many instances, the best available bypass will channel friendly forces into enemy kill zones or ambushes.

4-38. To enable a force to move personnel, equipment, and supplies on the mountain battlefield with limited delays due to terrain, visibility, or obstacles, commanders should organize soldiers with advanced mountaineering training as guides, lead climbing teams, installation teams, and evacuation teams (evacuation teams are covered in the combat health support portion of Chapter 5).

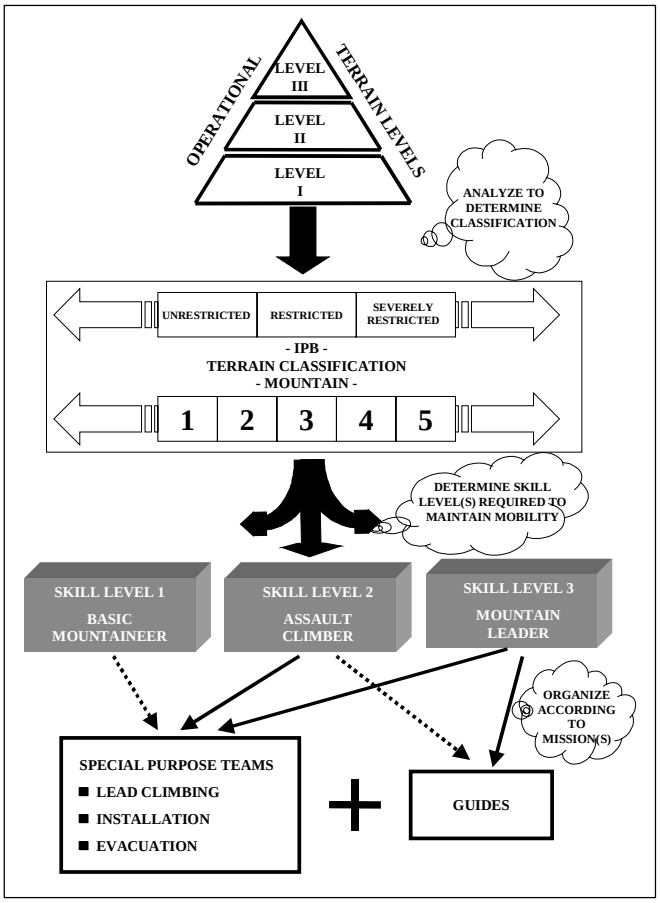


Figure 4-4. Relationship of Terrain to Skills and Special Purpose Teams

HISTORICAL PERSPECTIVE

The 10th Mountain Division and Riva Ridge (February 1945)

After attempts to capture Bologna in Italy's Po Valley during the winter of 1944-1945 failed, Allied commanders focused on the possibility of wide sweeping movements aimed at encircling Bologna and all the German armies in the region. The plan called for using the 10th Mountain Division to capture a series of mountain peaks and ridges dominating a 10-mile section of Highway 64, one of two main routes leading from Pistoia through the northern Apennines to Bologna. This would provide the Allies with a better position before starting the spring offensive, since seizure of this terrain would result not only in the Germans' being unable to protect their vital lines of communications, but also in the Americans' being able to observe German activity almost all the way to the Po Valley, approximately 40 miles away. The Division's baptism-by-fire was to be in a region dominated by two ridges whose highest peaks rose 3,000 to 5,000 feet. One of these ridges, Pizzo di Campiano-Monte Mancinello, became known as Riva Ridge (see Figure 4-5).

4-61. The preparatory phase may also include feints and demonstrations to shape the battlefield. In mountainous terrain, the defending force has a number of advantages that allow it to defeat an attacking force much larger than its own, such as long-range observation, rugged natural cover, concealment, advance siting of weapons, and operations on familiar terrain. Feints and demonstrations mask friendly operations, expose enemy vulnerabilities, disorganize the defense, and allow the attacking force to engage the enemy discriminately. In a mountain area of operations, the benefits achieved from a successful deception effort may well outweigh the difficulties involved in mounting it.

FORMS OF MANEUVER

4-62. The forms of offensive maneuver are common to all environments, to include mountainous terrain. While frequently used in combination, each form of maneuver attacks the enemy in a different way, and some pose different challenges to the commander attacking in the mountains.

INFILTRATION

4-63. Infiltration is frequently used in the mountains. The difficult terrain and recurring periods of limited visibility allow for undetected movement. Infiltration in a mountainous environment is used to shape the battlefield by attacking enemy positions from the flank or the rear, securing key terrain in support of the decisive operations, or disrupting enemy sustaining operations. Infiltration is normally conducted using one of three techniques: movement in small groups along one axis, movement in one group, or movement in small groups along several routes at the same time. Regardless of the technique used, units must move in a covert manner to reduce the chance of enemy contact.

4-64. With movement in small groups along one axis, all members of the force use the best route. Small groups are harder to detect and easier to control, and do not compromise the total force if detected. This technique may require an excessive amount of time and an increased number of guides and lead climbing teams, and does require an assembly area or linkup point prior to conduct of the decisive action. If the lead group is detected, other groups may be ambushed.

4-65. The enemy can more easily detect movement in one group. If the force is detected, the overall mission may be endangered. However, this technique has no reassembly problems, since reassembly is not required. Everyone uses the same route, easing navigation and reducing the number of guides and lead climbing teams required. A large force can fight out of a dangerous situation more easily than a small one. This technique minimizes coordination problems with other infiltrating units.

4-66. Movement in small groups along several routes at the same time has several advantages. It avoids putting the total force in danger and is less likely to be seen. It forces the enemy to react in many locations and makes it harder for him to determine the size of the force or its mission. Groups travelling over severely restrictive terrain may have significant assembly,

control, and sustainment difficulties, and may require more guides, lead climbing teams, and installation teams.

ENVELOPMENT AND TURNING MOVEMENT

4-67. The envelopment and its variant, the turning movement, are used extensively in mountain operations. Both forms of maneuver seek to avoid the enemy's strength and attack the enemy at a decisive point or points where the enemy is weakest or unprepared, and both rely on superior agility. In the mountains, the ability to react faster than the enemy may be achieved through greater mountaineering skills, using airborne and air assaults, and, depending on the specific AO, amphibious assaults.

PENETRATION

4-68. Mountainous terrain normally makes penetration extremely dangerous or impossible because of the difficulty in concentrating overwhelming combat power in the area of penetration. Due to mobility restrictions, it is also difficult to develop and maintain the momentum necessary to move quickly through a gap and on toward the objective. The area of penetration is always vulnerable to flank attack, and this vulnerability significantly increases in mountainous terrain. A penetration may be useful when attacking an enemy that is widely dispersed or overextended in his defense. If a penetration must be conducted, flank defensive positions must be eliminated before the initial breach of enemy positions. Successful penetration of a defensive position in restrictive mountainous terrain requires using limited visibility, stealth, and covered and concealed terrain at selected breach points.

FRONTAL ATTACK

4-69. Frontal attacks in hilly or mountainous areas, even when supported by heavy direct and indirect fires, have a limited chance of success. Mountain terrain adds to the relative combat power of the defender. The frontal attack exposes the attacker to the concentrated fire of the defender while simultaneously limiting the effectiveness of the attacker's own fires. In the mountains, the frontal attack is an appropriate form of maneuver to conduct as a shaping operation designed to fix a force, while the decisive operation uses another form, such as the envelopment, to defeat the enemy.

MOVEMENT TO CONTACT

4-70. The fundamentals regarding movement to contact also apply in a mountainous environment with the added likelihood of surprise attack and ambush. Limited mobility and dependence on restrictive terrain make it difficult to rapidly deploy from the movement formation. Plans and movement formations and techniques should be based on maintaining flexibility and providing continuous security.

4-71. During a movement to contact, the advance guard normally advances in column, moving continuously or by bounds, until it makes contact. While requiring less physical exertion, movement along the topographical crest of a ridgeline increases the possibility of enemy observation and should normally be avoided. Given adequate concealment, this exposure may be reduced by

moving along the military crest. Ridgelines and crests can often provide a tactical advantage to the force that controls them. Their control may allow rapid movement from one terrain compartment to another and afford excellent observation into lower terrain levels. In all cases, commanders must address the control or clearance of ridgelines that dominate their planned avenues of approach.

4-72. The main body should never be committed to canalizing terrain before forward elements have advanced far enough to ensure that the main body will not become encircled. This is a critical factor when employing mixed heavy and light forces that have sharp differences in operational tempo. Combat service support must be decentralized and readily available to sustain the combat elements. Major terrain compartments may physically separate maneuver units moving as part of a larger force. Continuous reconnaissance to the front and flank security is essential to prevent the enemy from infiltrating the gaps between units.

4-73. As the enemy situation becomes better known, commanders may shorten the distance between elements to decrease reaction time, or they may begin to deploy in preparation for the attack. Lateral movement between adjacent columns is frequently difficult or impossible. However, every attempt should be made to maintain at least visual contact. Commanders must emphasize the use of checkpoint reporting, contact patrols, and phased operations to coordinate and control the movement of the overall force. Control measures should not be so numerous as to impede operations and stifle initiative. Proper control ensures that units and fires are mutually supporting, objectives are correctly identified, and units are in position to attack.

ATTACK

4-74. Speed, flexibility, and surprise, normally advantages enjoyed by the attacker, are limited by restrictive terrain and the defender's increased ability to see and acquire targets at greater distances. These limitations make it difficult for units above the company team level to conduct a hasty attack against prepared positions. In the mountains, commanders usually need more time to coordinate fire support, pick routes to prevent enemy observation and detection, and select control measures to coordinate and control the operation. Therefore, deliberate attacks requiring a detailed scheme of maneuver and well-developed fire support plan become the norm at battalion-level and above. Since daylight contributes to the defender's ability to see and, thereby, reduces the attacker's chances of success, commanders should seek opportunities to exploit the advantages of limited visibility. Although these conditions slow movement even more and make coordinating forces more difficult, they decrease the enemy's ability to accurately sense what is happening and react effectively.

4-75. In planning and conducting the attack, commanders should recognize that the enemy will generally seek to control the valleys and trail networks, including adjacent slopes and high ground. Defenses normally be anchored around obstacles, and long-range, direct fire weapons employed in poorly trafficable terrain, often on slopes and protruding high ground. The enemy will attempt to engage the attacker in the valleys and low ground with flanking

fires and artillery, often in a direct fire mode. Commanders must analyze the terrain to determine not only how the enemy will organize his defensive positions, but also how the terrain might contribute to the enemy's ability to counterattack. As friendly forces attempt to deploy for the attack, the enemy, using his advance knowledge of the terrain and prepared routes, may maneuver forces to counterattack from the flank or rear.

4-76. All terrain features that can be occupied by even a small enemy force should be secured. In many instances, overwatch positions may not be readily available within the range capability of organic weapons. Infiltration, technical climbing, and extensive breaching may be required to position weapons to support the assault. On many occasions artillery support, especially in high mountains, may not be available. In other instances, commanders may need to identify intermediate objectives for maneuver forces based on the need to ensure that artillery units have suitable, secure firing positions to range the enemy and support the attack. As in all environments, commanders must identify fire support requirements and allocate fires based on the ability to support and available ammunition. Because resupply may be limited and extremely difficult, they may need to place restrictions on the amount of ammunition expended on specific targets.

4-77. Fire and movement during the assault are extremely difficult. In situations where machine guns can be positioned effectively, a rifle platoon can provide itself with support from a flank or from a height. However, during an assault up a slope, supporting fire cannot come from an overwatch position and must originate from the flanks or through gaps between the assaulting soldiers. Control is difficult to maintain when the assault is in steeply rising terrain. Commanders must pay special attention to the dangers of fratricide.

4-78. Fire and movement are easier in an assault over a downward slope. Down-slope assaults often have the advantage of good observation, but dead spaces and intervening terrain may reduce the effectiveness of supporting fires. Defensive positions laid out by a skillful enemy on a reverse slope significantly increase the effect of unfavorable down-slope conditions. This type of defense compels the attacking force to position its supporting weapons and observation posts on exposed crests. In this situation, support elements must be positioned to avoid terrain masking and crest clearance problems.

4-79. Breaching obstacles and preparing bypass routes that allow the assault force to move into the defensive position must be an integral part of the commander's plan. In rugged terrain, man-made obstacles that are covered by fire create a particularly dangerous and formidable barrier. Command and control of a covert, in-stride, deliberate, or assault breaches is more difficult than in open terrain, and mobility support is extensive if the obstacle cannot be reduced. Assaults in mountainous terrain almost always involve preparing routes that allow the assault force to rapidly move over difficult natural obstacles and into the objectives.

4-80. Commanders should maintain a strong reserve, if possible. In the mountains, as elsewhere, commanders can use their reserves to restore the momentum of a stalled attack, defeat enemy counterattacks, and exploit success. Reserves must be carefully positioned and organized so difficult terrain, limited road networks, or unpredictable weather does not delay their arrival.

Once committed, commanders make every effort to reconstitute another reserve from available units.

4-81. An attack should not be halted on a summit or on a ridgeline objective, which enemy artillery and mortar fire will likely target. Reorganization is generally best conducted well forward of a crest line on the next suitable slope. Commanders must ensure that the enemy is not allowed the opportunity to counterattack to recapture key terrain. Rapid adjustment of positions and coordination with flanking units are essential. Support weapons, especially mortars, should be brought forward as quickly as possible. Helicopters are useful for this purpose and may be used for backhaul of casualties.

COUNTERATTACK

4-82. Counterattacks in the mountains must exploit the aspects of terrain that impair enemy momentum and make it difficult for him to mass and maneuver. Obstructing terrain that canalizes movement and restricts mobility significantly increases the potential for counterattacks. In planning a counterattack, the commander must carefully consider the enemy's weaknesses or inability to operate in a mountainous environment. A counterattack, even on a very small scale, can have a decisive impact in mountainous terrain.

RAID AND AMBUSH

4-83. The restrictive terrain also affords increased opportunities to conduct raids and ambushes. These operations should take advantage of limited visibility and terrain that the enemy may consider impassable. In steep terrain, movement time increases significantly, and only light equipment can be taken. The force should use special climbing techniques to negotiate the difficult routes during limited visibility. Commanders must carefully consider the routes and methods used for extraction to ensure that the combat force does not become isolated after executing the mission. They can ensure a successful operation by avoiding detection through proper movement techniques and by skillfully using natural cover and concealment. It may be necessary to reposition some indirect fire support assets to cover dead space or use attack helicopters and close air support. The ambush or raid commander must know in advance if supporting fires cannot cover his routes to and from the objective.

DEMONSTRATIONS AND FEINTS

4-84. Because maneuver space is usually limited or confined and restricts the number of avenues of approach for heavier forces, deception plays an important part in the mountain battle. To mislead the enemy regarding friendly intentions, capabilities, and objectives, commanders should plan systematic measures of deception.

EXPLOITATION AND PURSUIT

4-85. In a mountainous environment, exploitation and pursuit operations must be conducted discriminately and the mountain commander must always prepare for success. A battalion may exploit its own success to a limited extent, but it normally participates in the exploitation as part of a larger force. Air assault and attack helicopter units can be used to augment exploitation

and pursuit operations. The exploiting commander must compensate for the ground mobility restrictions imposed by terrain and weather. Speed can best be achieved by isolating enemy positions with the smallest force possible. Engineer support should be well forward with the necessary equipment to allow combat troops to maintain momentum and avoid delay by enemy obstacles. The commander must be careful to prevent overextending either the exploiting force or its sustaining logistics. A withdrawing force is capable of establishing numerous strong points and firing positions on heights that allow it to quickly dissipate the combat power of the exploiting force.

MOTTI TACTICS

4-86. Motti tactics are presented here to demonstrate how forces can exploit superior mobility skills and knowledge of the mountainous terrain and environment to defeat the enemy. The Finns developed these tactics during the Finnish-Russian War in 1939-1940. They are characterized by attacks on rear areas, bivouac sites, and command posts.

4-87. The Finnish word "motti" means a pile of logs ready to be sawed into lumber – in effect, setting the conditions so that a larger force can be defeated in detail. These tactics were most successful in the forested areas of Finland during the arctic winters. During the Finnish-Russian War, the Soviets were neither prepared for, nor trained for, warfare under such conditions. They were almost totally trail-bound, with few ski troops. In the 1980s, the Soviet Union experienced similar difficulties in the mountains of Afghanistan. In both instances, the road and trail-bound nature of their forces and their basic tactics left them vulnerable to motti tactics in mountainous terrain.

4-88. Generally, the force utilizing motti tactics never becomes decisively engaged. It disrupts the enemy's supply lines, denies him warmth and shelter, infiltrates his bivouacs, and destroys his rear areas to the point where he must remain in a high state of alert. These attacks, in combination with the environment, help to destroy the enemy's will to fight. Commanders should not only develop a thorough understanding of how to apply these tactics, but also understand the conditions that may leave their own forces vulnerable to its use (see Figure 4-8 on page 4-24).

Motti tactics generally follow the sequence of:

1. Locating and fixing the enemy.

2. Isolating the enemy.

3. Attacking to defeat or destroy the enemy.

4-89. Reconnaissance is conducted to locate an enemy force moving in or toward an area that will restrict his movements to roads, trails, or linear terrain. Once identified, the force must be fixed so that it presents a linear target along the axis of advance to which it is bound. This is accomplished using obstacles and a series of squad and platoon sized ambushes and raids. Obstacles may be natural, such as snow, crevices, deep mud, steep terrain, and

water obstacles, or man-made, for example mines, landslides, avalanches, or destroyed bridges.

4-90. The ambushes and raids not only fix the enemy, they also disturb his composure, create an air of uncertainty, and prevent uninterrupted sleep and rest. Friendly units attack the enemy from the high ground. They make maximum use of night vision devices, as well as the difficult restrictive terrain. They avoid enemy security and interdict his operations. As a further result of these actions, the enemy is compelled to use more forces on security tasks. Unless the enemy can be easily defeated or destroyed, the attacking force rapidly withdraws after forcing the enemy to deploy. In general, this series of attacks confuses the enemy as to the friendly unit's exact location and intent, and slows his decision-making cycle so that he reacts ineffectively to subsequent operations.

FORCES CAN USE MOTTI TACTICS WHEN THEY:

- **Have superior technical mobility skills necessary to negotiate Class 4 and 5 terrain**
- **Are able to operate effectively in a noncontiguous area of operations with limited support, and despite temperature extremes and inclement mountain weather**
- **Are able to navigate in high mountainous terrain, dense vegetation, darkness, storms, and fog while making good use of available cover and concealment**
- **Maintain the element of surprise**

FORCES ARE VULNERABLE TO MOTTI TACTICS WHEN THEY:

- **Operate within noncontiguous areas of operations**
- **Have limited mobility skills restricting their movements to roads, trails, and Class 1 and 2 terrain**
- **Have inadequate reconnaissance and security**

Figure 4-8. Conditions Affecting the Use of Motti Tactics

4-91. The attacking force then isolates the enemy into smaller groups. Once isolated, the friendly force maneuvers to envelop and attacks to defeat or destroy the isolated elements. As the enemy exhausts himself in an effort to break out, the attacking force may regroup and repeat the sequence. It is imperative that the attacking force seal off the enemy and keep avenues of approach closed, and not ignore the threat to its flanks, which may increase as the attack progresses.

4-92. Overall, motti tactics wear the enemy down to a point where he is vulnerable to more direct attacks or to the point where it is no longer beneficial or feasible to continue operations in the area. Motti tactics employed alone only prove decisive over a long period of time, depending on the enemy's capabilities, strength, and resolve. Based on METT-TC, friendly forces normally must increase the operation's tempo to gain a quick, decisive outcome. Still,

these type tactics may complement other more direct offensive operations in support of the overall plan.

SECTION III – DEFENSIVE OPERATIONS

4-93. In the mountains, more so than in the lowlands, the strength of the defense depends on its selection and use of key and decisive terrain. Key and decisive terrain provides the defender–and usually denies the attacker–excellent observation and fighting positions. Reinforcing obstacles significantly enhance the natural obstacles of rugged mountainous terrain.

4-94. The immediate objective of a mountainous defense is to deny the enemy access to key terrain that helps him conduct further operations. Therefore, it is necessary to defend in terrain that restricts and contains the enemy, as well as control the high ground that dominates this terrain. The effects of rapidly changing weather, visibility, and mountain hazards must be continually assessed. The terrain provides the defender with cover, concealment, and camouflage that can deceive the enemy regarding the strength and dispositions of friendly forces. The advantages of knowing the terrain, having fortified positions, siting weapons in advance, stockpiling supplies, and identifying or preparing lateral trail networks favor the defense. They allow the defender to shift forces on the ground more rapidly than the attacker. Delaying operations are particularly effective in the mountains and can be accomplished by a smaller force. These advantages combine to make the mountains an ideal place for defensive operations. Regardless of the scale of defensive operations, key factors in achieving success in the mountains are having good observation and aggressive reconnaissance, while denying the same to the enemy.

PLANNING CONSIDERATIONS

4-95. Defending commanders must develop flexible plans for control of fire, maneuver, communications, and logistics. Initially, the attacker has the initiative and decides where and when combat will take place. The defender must be agile enough to maintain control of the heights, strike effectively, and shift his effort quickly without losing momentum and flexibility. Tactical flexibility depends on planning in detail, organizing in depth, and retaining an adequate, mobile reserve.

4-96. Although the mountains generally allow observation at greater distances, intervening terrain features and weather often prevent commanders from seeing the area of operations beyond the area to their immediate front and flanks. Consequently, commanders normally allocate more assets for reconnaissance and security, echeloned in depth and in height, to ensure that they are able to sense all aspects of the AO and gain the time needed to decisively apply combat power.

4-97. Commanders must prevent the enemy from concentrating overwhelming combat power against isolated sections of their defense. The restrictive terrain is one of the primary advantages of the mountain defender, as it interferes with the attacker's synchronization, canalizes his movement, and impedes his ability to maneuver. However, unless commanders carefully

analyze the terrain from both the friendly and enemy viewpoints, to include the horizontal and vertical perspectives, they leave themselves vulnerable to infiltration and possible attack from the flanks and rear along difficult and unexpected routes.

4-98. In the mountains, commanders usually organize for a perimeter defense to be prepared to defeat the enemy from any approach, to include those that may appear impassable. Although preparing for an all-around defense, they should weight a portion of the perimeter to cover the most probable direction of enemy attack. Rocky terrain may make it more difficult to prepare defensive positions and rapidly changing weather may halt preparations altogether. If sufficient forces are not available, the commander must economize in some areas and rely more heavily on prepared positions, to include alternate and supplementary positions, obstacles, and well-planned indirect fires to cover gaps and dead space.

4-99. The width of an area to be defended depends mainly on the degree to which terrain is an obstacle. Terrain that significantly restricts enemy movement tends to favor a larger AO. Normally, an area should be approximately as deep as it is wide, and may include the entire length and surrounding heights of a valley. Ridges that run at right angles to the enemy's direction of attack also permit increased width with less depth. A defense in depth is required in valleys that run in the direction of the enemy's attack. In either case, it is essential to have forces deploy on the dominating heights that control approach routes.

4-100. Ideally, reserves should be mobile enough to react to enemy action in any portion of the perimeter. Less mobile reserves are positioned to block the most dangerous avenues of approach and assigned on-order positions on other critical avenues. Sharply compartmented terrain may require the creation of more than one reserve. Helicopters may be used to deploy reserves, but their use depends on the availability of suitable, secure LZs and favorable weather conditions.

PREPARATION

4-101. The process of preparing the defense must begin with a thorough reconnaissance. Preparations for a mountain defense require more time than in other terrain, and as units arrive they must begin immediate preparation of their defensive positions. In some instances, technical mountaineering skills may be needed to establish effective security and to emplace crew-served weapons properly. However, commanders must weigh the advantages gained from these inaccessible positions against difficulties in repositioning and resupply. Preparations for the defense must also include installing communications, stocking forward supply points with particular attention to Class IV, emplacing medical elements, adjusting air defense coverage, and arranging for security of installations in the rear area. Commanders must ensure that time is available to develop alternate routes and positions, rehearse and time movements between positions and along routes, and rehearse counterattacks.

4-102. Commanders must seek every opportunity to recapture the initiative from the attacker and transition to offensive operations. Preparations for a counterattack in the mountains must include caching ammunition, preparing

counterattack positions and routes to attack downhill, identifying crew-served weapon positions, and establishing rally points that are usually on the reverse slope.

ORGANIZATION OF THE DEFENSE

4-103. Defensive operations in the mountains derive their strength, balance, and freedom of action from the effective use of terrain. The mobility restrictions found in mountainous areas, combined with the necessity to hold dominating ground, dictates that an area defense be used. Mountain defenses use security forces, continuous reconnaissance and combat patrols, as well as numerous observation posts. The mountain AO is usually organized into a security area, main battle area (MBA), and rear area.

SECURITY OPERATIONS

4-104. While a screening force is often thought to be the most preferable form of security in extremely rugged mountainous terrain, all forms of security operations, to include guard, cover, and area, may be employed effectively in a mountain AO based on the factors of METT-TC with particular emphasis on:

- Forces available for security operations.
- Ability to maintain a mobility advantage.
- Size of the security area and the number of avenues of approach.
- Likelihood of enemy action.
- Size of the expected enemy force.
- Amount of early warning and reaction time needed.

4-105. A screen primarily provides early warning to the protected force and is usually an economy-of-force measure. The compartmented nature of mountainous terrain often serves to create multiple gaps and exposed flanks. The rugged terrain may also serve to restrict the movement of not only advancing enemy forces, but also the movement and mobility of larger friendly security forces. In these instances, commanders may choose to use minimum combat power to observe, identify, and report enemy actions at these locations, and engage and destroy enemy reconnaissance within the screening force's capability. The screening force may be able to avoid decisive contact by withdrawing into restrictive terrain that forces the enemy to utilize difficult climbing techniques if he continues the pursuit.

4-106. In the mountains as elsewhere, the screening force should adjust to the enemy advance and continue to screen as far forward as possible, even though elements of the force may have to withdraw. Retention of selected forward positions may allow surveillance and targeting forward of the MBA, upsetting the enemy's coordination. By allowing the enemy to bypass advance positions, the screening force can facilitate counterattack to the front of the forward edge of the battle area (FEBA) by providing observation of, and access to, the flanks and rear of attacking forces.

4-107. If a significant enemy force is expected or a significant amount of time and space is required to provide the required degree of protection, commanders usually resource a guard or cover mission instead of a screen. As long as

the security force can maintain a mobility advantage over the enemy, it can effectively delay and attack the enemy force by using obstacles and the restrictive terrain to its advantage. Although utilizing a greater proportion of his combat power, the appropriate use of a guard or cover force should provide the mountain commander greater depth in his security area and the ability to defeat, repel, or fix lead elements of an enemy ground force before they can engage the main body with direct and indirect fires.

4-108. No matter the type of security used, defending forces must prevent enemy infiltration by carefully positioning observation posts (OPs) and conducting continuous patrols and ambushes. Combat reconnaissance patrols and other intelligence gathering assets observe the enemy as far ahead of friendly positions as possible and report his strength and composition, as well as his route of movement. To accomplish this, reconnaissance patrols may need to rely heavily on technical climbing skills. Ground surveillance radar and unattended ground sensors can be used effectively, but the defender must be sure to cover all gaps and dead spaces. The defender must make best use of his time to study the ground and determine all possible infiltration routes.

MAIN BATTLE AREA

4-109. In rugged mountainous terrain, it may be difficult to maintain mutual support and overlapping observation. Elements should be employed to man observation posts, assist the passage of security forces into the MBA, cover obstacles and avenues of approach by fire, screen gaps between defensive positions, and ambush enemy infiltrators.

4-110. Defensive positions along ridges or dominating heights should include as much of the forward and reverse slopes as possible to add depth and all-around security. The actual size of unit positions is terrain-dependent. At a minimum, fighting positions and observation posts should be echeloned vertically, as well as in depth. When defending a mountain valley, forces should establish fighting positions that are located on adjacent heights and in depth to permit covering the valley with interlocking fire. These positions must also be anchored to restrictive terrain or adjacent defensive forces to prevent enemy envelopment. In wooded terrain, defensive positions may be organized on the forward edge of the woods, as well as on commanding heights. Obstacles should be widely employed to slow or stop enemy movement throughout.

4-111. Mountain warfare demands that forces conduct an aggressive defense. Defending units must infiltrate enemy units and attack headquarters, supply lines, and rear areas. Smaller patrols and OPs should be deployed well forward to direct artillery fire and attack aircraft on targets of opportunity, and to conduct personnel and antiarmor ambushes. Disruption operations should be conducted to force the enemy to deploy additional assets to protect lines of communication and delay and upset preparations for the attack. In the mountains, enemy forces can frequently be isolated if they are discovered in time and reserves are effectively placed and highly mobile.

4-112. In the defense, the reserves' primary purpose must preserve the commander's flexibility. In mountainous terrain, the commander may need to rely on the reserves as his principal means of restoring his defense's integrity

or exploiting opportunities through offensive action. Because of the difficulties of movement, small reserves may be located near primary defensive positions, ready for immediate counterattack. This type of small, responsive counterattack may be much more effective than a large-scale, major counterattack. It can catch the enemy exhausted after an uphill assault and before position consolidation. Large, centrally placed counterattack forces are normally unable to intervene in time unless the terrain permits mounted movement, or sufficient helicopter lift assets are committed to the reserve force or made rapidly available.

REAR AREA

4-113. To minimize the vulnerability of sustaining operations and extended lines of communication, command and control, as well as support operations, in the rear area must be dispersed, redundant, and as far from potential enemy approaches as possible. Because of limited space available in the rear area, the commander must be careful in selecting and locating positions for combat service support activities. These positions are likely to be confined to small valleys. Therefore, they are high-priority targets for enemy artillery and air attack or raids by small combat patrols, particularly at night or in bad weather. When possible, combat service support elements must avoid the most obvious positions and occupy atypical sites. However, they should be in the vicinity of a defined road network and an air loading area, even if the network or area is within Level II. Locating base defenses at Level II elevations may allow more access to supply bases for air resupply during inclement weather, such as the heavy fog often encountered in valleys and at lower elevations.

4-114. A perimeter defense is planned for each combat service support unit within the defensive area. Defensive positions should be selected on the dominating high ground. Sensors, OPs, and radars are used to cover avenues of approach and gaps between positions. Rear area forces must routinely conduct patrols and ambushes around the perimeter, especially at night and during other periods of limited visibility. Air defense assets should be located to protect rear area facilities. Tactical combat forces (TCF) must be prepared to respond rapidly to rear area threats and should be prepared to move to any of their objectives by multiple routes. However, units within the rear area must not fall into the trap of relying solely on a TCF for their security. No matter how well-organized or mobile the TCF, rear area units must provide their own well thought-out and active security measures, even at the cost of a reduced ability to sustain the force.

REVERSE SLOPE DEFENSE

4-115. Reverse slope defenses apply particularly well to mountain operations and pursue offensive opportunities through surprise and deceptive operations by defending in a manner for which the enemy is unprepared. This defense seeks to reduce the effects of massed indirect fire from mortar, artillery, and close air support, and draws the battle into the small arms range of infantry weapons. The overall goal is to make the enemy commit his forces against the forward slope of the defense, causing his forces to attack in an uncoordinated fashion across the exposed topographical crest. Once this type of defense is

employed, subsequent use may be of limited value, due to the loss of the key element of surprise.

4-116. All or parts of the defending force may use reverse slope techniques. In many instances, mountainous terrain favors a defense that employs combined forward and reverse slope positions to permit fires on enemy approaches around and over the crest and on the forward slope of adjacent terrain features. Key factors to this type of defense are mutually supporting covered and concealed positions, numerous natural and man-made obstacles, the ability to bring fire from all available weapons onto the crest, and a strong and mobile counterattack force.

4-117. The reverse slope defense is organized so that the main defensive positions are masked from enemy observation and direct fire by the topographical crest (see Figure 4-9). It extends rearward from the crest only to the maximum effective range of small arms fire. Observation and fires are maintained over the entire forward slope as long as possible to continue to destroy advancing enemy forces and prevent him from effectively massing for a final assault. A successful reverse slope defense is based on denying the topographical crest to the enemy, either by fire or by physical occupation. Although the crest may not be occupied in strength, control of the crest by fire is essential for success. For more detailed discussions of the reverse slope defense, see FM 3-100.40 and FM 3-21.30.

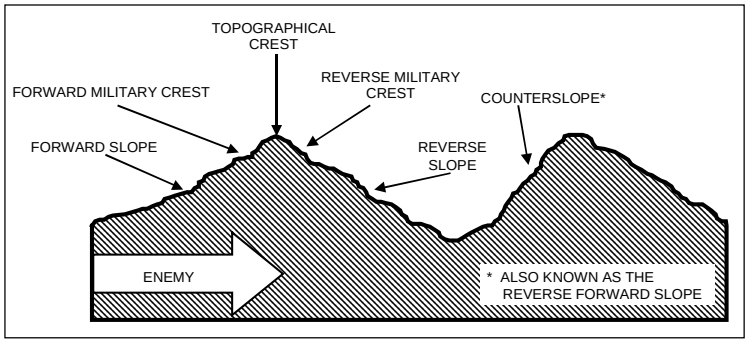


Figure 4-9. Reverse Slope Defense

RETROGRADE OPERATIONS

4-118. Retrograde operations of delay and withdrawal can be conducted in mountainous terrain with fewer assets because of the mobility difficulties of an advancing enemy. Delaying operations are particularly effective in the mountains. Numerous positions may exist where elements as small as a machine-gun or sniper team can significantly delay a large force. When conducting retrograde operations in mountainous terrain, the friendly force must accomplish several tasks.

- It must make maximum use of existing obstacles. However, the addition of relatively few reinforcing obstacles, such as the antitank mining of a route with very steep sides, often increases the value of existing obstacles.
- The force must conduct detailed reconnaissance of routes to rearward positions. Routes of withdrawal are not as numerous in mountainous terrain and often do not intersect as they do on flat terrain. These

factors complicate subsequent link-up operations and necessitate meticulous planning.

- It must protect the flanks and rear to prevent encirclement, particularly by air assault. There are only a few LZs and they can significantly influence the outcome of a battle. At a minimum, they must be covered by fire.

STAY-BEHIND OPERATIONS

4-119. The compartmented terrain in the mountains lends itself to the employment of stay-behind forces as a tool for offensive action. Stay-behind operations involve the positioning of friendly elements within operational areas before the enemy advances through the area. Stay-behind forces conceal their location and allow themselves to be bypassed as the enemy advances. (Figure 4-10 outlines the important tasks that stay-behind forces can accomplish for the mountain commander.)

- **Attack the enemy throughout the depth of his formations**
- **Disrupt the cohesion of the enemy offense by interrupting lines of communication and logistics**
- **Detract from the enemy's main effort by forcing him to allocate combat forces to rear areas**
- **Provide immediate intelligence**
- **Call for and control indirect fire and close air support**

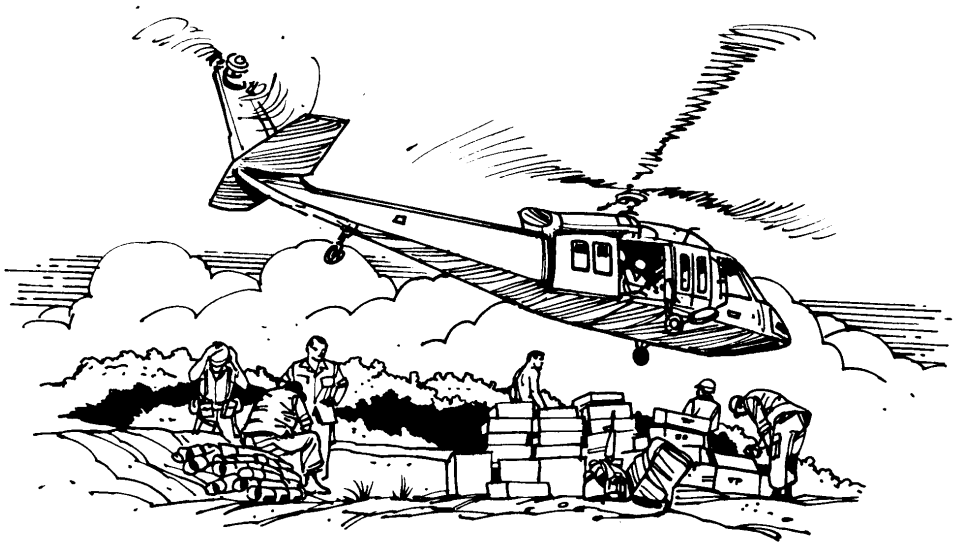
Figure 4-10. Tasks for Mountain Stay-Behind Forces

4-120. Stay-behind forces may be positioned forward of the FEBA, in the MBA, and not participate in the initial fight, or, under certain conditions, in the MBA after the fighting has started. When planning for stay-behind operations in the mountains, commanders must consider the following:

- Stay-behind forces should be a combined arms force that includes engineers.
- Indirect fire support or close air support should be available throughout their operations.
- Return routes must be well planned and reconnoitered in advance. Exfiltration, regardless of element size, should follow covered and concealed routes, and rally points should be designated forward of and behind the lines of friendly forces. Reentry must be carefully coordinated to prevent fratricide.
- After an attack, stay-behind forces may be unable to reach a hide position to subsequently return to friendly lines by exfiltration. If this occurs, they must be prepared to conduct a breakout.
- The tactical situation and logistics supplies that were stockpiled or cached in the AO have an impact on the length of time stay-behind forces remain in enemy territory.

Chapter 5

Logistics and Combat Service Support



Mountainous terrain poses great challenges to combat service support (CSS) forces and complicates sustaining operations. Existing roads and trails are normally few and primitive, and cross-country movement is particularly demanding. Highways usually run along features that have steep slopes on either side, making them vulnerable to disruption and attack. Rivers become major obstacles because of rapid currents, broken banks, rocky bottoms, and the lack of bridges. Landslides and avalanches, natural as well as man-made, may also pose serious obstacles to CSS operations. Mountainous areas have wide variations in climate and are subject to frequent and sudden changes of weather that may preclude reliance on continuous aviation support. Together, these conditions compound the obstacle-producing effects of mountainous terrain and create major challenges for the CSS planner. Therefore, the forward distribution of supplies may depend upon the knowledge, skill, and proficiency of CSS personnel in both basic mountaineering and aerial resupply operations.

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HISTORICAL PERSPECTIVE

The Importance of Lines of Communications: The Satukandav Pass (Soviet-Afghan War, November-December 1987)

One of the characteristics of the Soviet-Afghan War (December 1979 - February 1989) was the attempt by both sides to control the other's lines of communications (LOCs). In an effort to deprive the guerrillas of their source of sustainment, the Soviets used various methods to drive the rural population into exile or into cities. For their part, the Mujahideen regularly interdicted supply routes through the establishment of blocking positions and vehicular ambushes. In some regions, they were able to effectively interdict supply routes for weeks, months, and even years at a time. The Soviet main supply route was a double-lane highway network winding through the rugged and inhospitable Hindu Kush Mountains. The continued Soviet presence in Afghanistan depended, in large part, on their ability to keep the roads open. Therefore, much of heavy Soviet combat was a fight for control of this road network, with this control often changing hands during the course of the war.

In the fall of 1987, the Mujahideen had established a series of blocking positions that severely limited the supply of weapons, ammunition, and food to Soviet forces in the Khost district. In response, the Soviets planned and

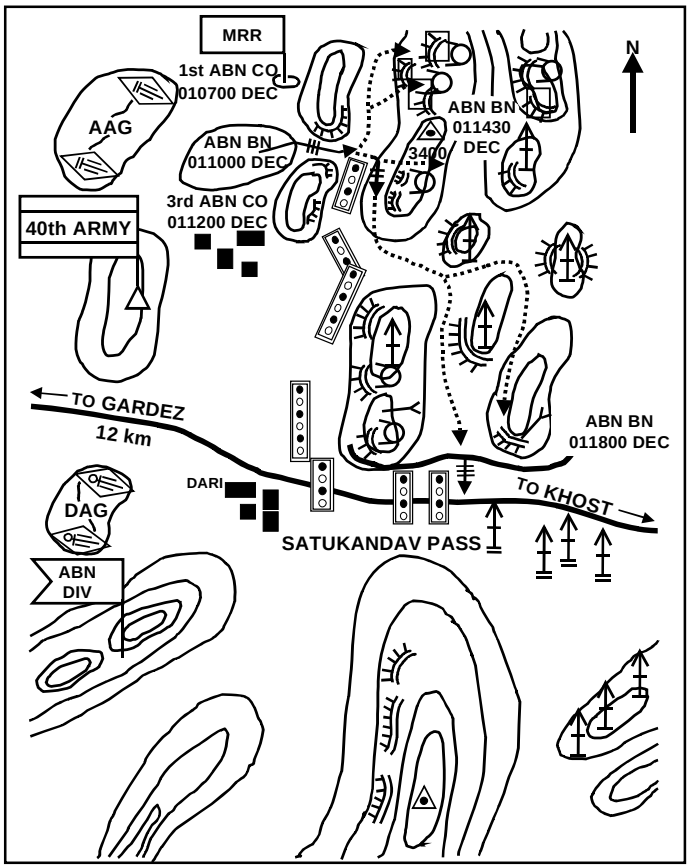

Figure 5-1. Satukandav Pass

conducted Operation Magistral, "main highway," to open the LOCs (see Figure 5-1). The guerrilla forces had established strong positions in the Satukandav Pass, virtually the only way through the mountains between Gardez and Khost. For the operation, the Soviets massed a motorized rifle division, airborne division, separate motorized rifle regiment (MRR), separate airborne regiment, various 40th Army regiments, special forces, and other subordinate units, and regiments from the Afghan Armed Forces. On 28 November, in order to determine the location of Mujahideen positions, particularly air defense systems, the Soviets conducted a ruse in the form of an airborne assault using dummy paratroopers. When the Mujahideen fired at the dummies, Soviet artillery reconnaissance was able to pinpoint enemy strong points and firing positions. The Soviets hit these positions with air strikes and a four-hour artillery barrage. The next day, however, an MRR failed to make its way up the foothills to seize the dominant terrain along the crest, and suffered heavy casualties. The 40th Army Commander, General Gromov, nevertheless, decided to continue to press his advance using the 1st Airborne Battalion and a battalion of Afghan commandos. On 1 December, two airborne companies captured key terrain and used this to support the decisive operation against the dominant peak to the south. This flanking attack took the Mujahideen by surprise and they began to withdraw. While calling in artillery fire on the retreating guerrilla forces, primarily on the reverse slope and along the probable avenue of approach for the commitment of enemy reserves, the Soviet battalion commander used this hard-won, key terrain to support a simultaneous, two-prong attack to the south toward the Satukandav Pass. Now it was the Soviets who were in a position to cut off supplies, especially fresh drinking water, from the Mujahideen. The latter were forced to withdraw, and the two battalions captured the pass. However, while the operation itself was a success, Soviet and Afghan Army forces could keep the road open for only 12 days, after which the Mujahideen once again cut off the supply route to Khost.

Both sides recognized the vital importance of LOCs, and this shift of LOC control was a constant feature throughout the entire duration of the Soviet-Afghan War. The Mujahideen's ability to interdict the LOCs prevented the Soviets from maintaining a larger occupation force there, a key factor in the eventual Soviet defeat.

Compiled from *The Other Side of the Mountain* and *The Bear Went Over the Mountain*.

SECTION I – PLANNING CONSIDERATIONS

5-1. Mountainous areas of operations dictate that commanders foresee needs before demands are placed upon CSS personnel. The main logistical differences between mountain operations and operations in other terrain are a result of the problems of transporting and securing material along difficult and extended lines of support. Logistics support must emphasize a continuous flow of supplies to specific locations, rather than the build-up of stocks at supply points along the main supply routes. Supply point operations alone are insufficient; the proposed support structure must plan for redundancy in the ability to distribute supplies directly to units operating from predetermined supply routes. If possible, commanders should plan to

use multiple supply routes designed to support maneuver elements moving on separate axis.

5-2. Commanders must be concerned not only with the sustainment of current operations but also with the support of future operations. A detailed logistics preparation of the theater (LPT) to identify the potential lines of communication plays a major part in determining the conduct of CSS operations. A detailed reconnaissance should be conducted to determine:

- The type and maximum number of vehicles that the road network can support in the area. New roads may need to be constructed or improvements made to existing ones to support protracted operations in isolated areas.
- Classification of bridges.
- Suitable sites for drop zones (DZs), loading zones (LZs), and short, tactical airstrips.
- Availability of water sources.
- Availability of local resources, facilities, and service and support activities.

5-3. Because of terrain constraints, it may be necessary to disperse support units over a wider area and ensure that supplies are positioned closer to supported units. Dispersion reduces vulnerability of CSS assets, which also creates problems with command, control, and security. CSS units are often high-priority targets, and must ensure adequate protection against ground and air attacks.

5-4. In mountainous terrain, battalion CSS elements are normally echeloned into combat and field trains to increase responsiveness, provide adequate space, and decrease the logistics footprint. Combat trains are routinely located in ravines or valleys on the rear slope of the terrain occupied by the unit. This permits the personnel officer (S1) and logistics officer (S4) to operate in close proximity to the tactical operations center (TOC), and allows them to keep abreast of unit requirements.

5-5. In the mountains, unresolved logistical problems can quickly lead to mission failure. Ground operations may increase fuel consumption rates of individual vehicles by 30 to 40 percent, requiring more frequent resupply operations. The operation of equipment in mountainous terrain has proven that maintenance failures far exceed losses due to combat, and most breakdowns can be attributed to operator training. Air operations are characterized by a significant increase in lift requirements; however, increased elevations decrease aircraft lift capabilities.

5-6. Commanders must carefully consider combat loads in the mountains, based upon a thorough mission analysis. Excess equipment and supplies reduce the efficiency of the individual soldier and seriously impede

operations. In steep terrain above 1,500 meters (5,000 feet), soldier loads may need to be reduced by nearly 50 percent. Commanders must develop priorities, accept risk, and require the combat force to carry only the bare essentials needed for its own support. Nonessential equipment should be identified, collected, and stored until it is needed. In situations where there are conflicts between the weight of ammunition and weapons, experience has shown that it is better to carry more ammunition and fewer weapons. In the mountains, commanders should strive to achieve the imperatives indicated in Figure 5-2.

- **Limit supplies to essentials.**
- **Lighten the individual soldier's combat load.**
- **Improvise methods and supply sources, to include utilizing captured enemy supplies and equipment.**
- **Use aviation assets to increase responsiveness.**
- **Anticipate maintenance requirements.**
- **Develop plans that place realistic demands on the CSS system.**

Figure 5-2. Mountain Supply Imperatives

SECTION II – SUPPLY

5-7. Units operating in mountainous terrain transport supplies by a combination of wheeled vehicles, oversnow vehicles, indigenous pack animals and personnel (see FM 3-05.27), assisted by Army and Air Force lift assets. These combinations depend on equipment availability, location of combat units, type of terrain, and weather. However, any combination of resupply usually includes combat soldiers man-packing supplies to their positions.

5-8. Since combat operations in the mountains are decentralized, CSS operations are correspondingly decentralized. This decentralization serves to create heavier man-loads, while rough, steep terrain decreases the amount soldiers are able to carry. Although most soldiers are eventually able to acclimate themselves to higher elevations, their pace and subsequently the overall pace of the entire operation slows down as elevation increases.

5-9. Mountain warfare is highly dependent on accurate logistical planning if supply operations are to function smoothly. To win in any area of operations (AO), commanders normally seek to move and strike as rapidly as possible. Rapidly changing tactical situations may cause long supply lines, resulting in delay or complete disruption of supply operations. To mitigate these risks, situational understanding, rapid decisions, and continuous coordination between tactical and logistical planners are essential. Stockpiling and caching supplies may also help to decrease the risks to resuppply.

5-10. The total tonnage of supplies required by the force may also decrease. For example, while individual vehicle petroleum, oils, and lubricants (POL) consumption may increase, overall consumption may decrease because of lower vehicle movement. The quantity of supplies needed by the individual soldier normally increases. Soldiers consume more food because of increased

energy expenditure, and need many additional items of equipment, such as extra clothing, sleeping bags, climbing equipment, tents, and stoves, all of which must be stored and transported.

SUPPLY ROUTES

5-11. Main supply routes are generally limited to the roads located along major valleys and, through necessity, to the smaller, more restrictive trails that follow or parallel the ridgelines. The limited number of routes increases the volume of traffic and places heavy demands on engineer units to maintain them. In most cases, engineer units require assistance in clearing and developing, as well as in securing, these routes. Travel times for ground transportation assets are significantly increased due the generally poor quality of mountain roads and trails, frequent switchbacks, and steep grades that require lower vehicle speeds. Traffic control assumes increased importance due to the limited number of routes in the mountains, and may require an increased number of military police dedicated to the task of battlefield circulation control. In particular–

- Existing roads should be rapidly analyzed for bottlenecks, deployment areas, passing places, and turnarounds for various vehicles.
- Routes should be classified as one- or two-way, and schedules developed for the use of one-way routes.
- Signs should be placed for both day and night moves on difficult and dangerous routes.
- Whenever possible, separate routes should be designated for vehicular and dismounted movement. Additionally, separate routes should be designated for wheeled and tracked vehicles, particularly if the latter are likely to damage road surfaces.

5-12. The enemy will emphasize destroying logistical units and interdicting supply activities. Enemy units will infiltrate and seize key terrain that dominates supply routes in an effort to disrupt and isolate units from their logistics support. Using mountain trails and roads without securing the high ground on both sides invites ambush. Patrols must be continually conducted at irregular intervals to verify the status of roads and prevent enemy infiltration. Patrols must be continuously alert for ambush and they must be skilled at locating and identifying mines. However, a combination of patrols and aerial reconnaissance is the best means of providing route security. Observation posts on dominant terrain along supply routes are also essential for early warning of enemy infiltration into rear areas.

5-13. Most often, units have to use the narrrow ridge trails as alternate supply routes, in some instances as main supply routes, to reduce the volume of traffic on the main supply routes located along valley floors. This involves movements in much more restrictive terrain and exposure to excellent observation and fire by the enemy. Supply columns moving along separate

routes face the same problems as combat units; they face the difficulties of being able to provide mutual support due to compartmented terrain, should one column come under attack. Movement of supplies at night may reduce vulnerability to enemy attack, but night marches present other hazards due to the difficult terrain, and require daylight reconnaissance, careful route preparations, and using guides.

CLASSES OF SUPPLY

CLASS I: RATIONS AND WATER

5-14. The strenuous activities required during mountain operations increase caloric requirement to 4,500 calories or more per day. Improper or too little food means soldiers will lack the stamina to accomplish the mission. Although combat rations are normally used, unitized group rations (UGRs) should be provided once a day if the situation permits. Individual packages of oatmeal and dehydrated soup mixes should be issued if the UGR cycle cannot be maintained.

5-15. In abrupt ascents to high altitude, soldiers do not have time to acclimate themselves, so their entire circulatory system labors to supply oxygen to the body. In this situation, standard rations are hard to digest and special rations, such as the ration, cold weather (RCW), that allow soldiers to eat light and often should be procured. The totally self-contained operational ration consists of one full day's feeding in a flexible, white-camouflaged meal bag. It contains cooked, freeze-dried, or other low moisture entrees, as well as a variety of items such as oatmeal, a nut-raisin mix, and fruit-cookie bars. The RCW provides sufficient calories (approximately 4,500 kilocalories) to meet the increased energy expenditure during heavy exertion, while limiting sodium and protein content to reduce the risk of dehydration. Because of rapidly changing weather conditions and the difficulty of resupply, each soldier may need to carry two to three days' supply of rations. However, this increases the soldier's load by approximately 10 to 15 pounds.

5-16. Proper water production, resupply, and consumption are essential and a constant challenge during mountain operations. In low mountains, planners should count on at least four quarts of water per soldier per day when static and up to eight quarts per day when active. In high mountains, planner should increase those requirements by about two quarts per soldier. In the mountain environment, medical care often requires an increased water supply and must be considered as part of the original planning and contingency factors.

5-17. Units should always be prepared to use natural water sources to help reduce the logistics burden. However, far above the timberline, water is extremely difficult to find. Special measures must be taken to protect it from freezing in cold weather, such as placing canteens in the chest pockets of the extended cold weather clothing system (ECWCS) coat, hanging a two-quart canteen on a strap under the coat, or utilizing a camel-back type, commercially available, canteen under overgarments. Purification and chemical sterilization are always necessary no matter how clean mountain

water may appear. Micro-organisms present in mountain water may cause serious illness and rapidly degrade the strength of a unit. If above ground water sources cannot be located or are not reasonably available, drilling for underground sources may become a critical engineer task. Once engineer units access the water, quartermaster units have responsibility for completing the water points and purifying the water.

CLASS II: GENERAL SUPPLIES

5-18. General supplies include expendable administrative items, individual clothing and equipment, tentage, and other items authorized by common tables of allowance. All units must deploy with enough Class II items to last until routine resupply can be established. Special items, such as extended cold weather clothing, gloves, climbing equipment, extended cold-weather sleep systems, batteries, and one-burner cook stoves, will be in great demand. Due to the rugged nature of the terrain, mountain operations also increase requirements for replacement items of individual clothing and equipment. Combat boots, for example, may be expected to last approximately two weeks in harsh rocky terrain.

CLASS III: FUEL AND PACKAGED PETROLEUM PRODUCTS

5-19. Individual vehicles need much more fuel in mountainous terrain. However, limited road nets and steep slopes reduce the volume of vehicle traffic and overall fuel consumption. The heavy reliance on aviation assets for resupply and movement increases aviation fuel requirements. A commander must routinely plan for the emplacement of a forward arming and refueling point (FARP) within their AO to support intensive aviation operations. Battalions should establish a fuel point in the field trains using collapsible fuel drums. These drums should be operational as soon as the field trains are established and prepared to receive fuel from the forward supply company as soon as it arrives. When terrain makes refueling operations vulnerable to attack, units should conduct forward refueling using supply point distribution, and dispense fuel to unit vehicles using the tailgate technique. The lack of suitable terrain normally increases the percentage of forward refueling done by this method.

5-20. At 600 meters (2,000 feet), multi-fuel cook stoves operate at about 75 percent efficiency. When soldiers refuel cook stoves, they must avoid using automotive fuel. Fuel points must supply units with refined or white gasoline that is specifically produced for pressurized stoves. Relatively large quantities of this fuel will be used when procuring water and preparing food. Adequate quantities of five-gallon cans, nozzles, and one-quart fuel bottles must be on-hand before deployment.

CLASS IV: CONSTRUCTION, BARRIER, AND FORTIFICATION MATERIALS

5-21. Soldiers should make maximum use of local materials to reduce Class IV requirements and demands on the transportation system. Gabion-type material is especially versatile during mountain operations. Gabions are widely used in the mountains for constructing obstacles, fighting positions,

anchors, mountain installations, traverse platforms, and helicopter LZs; for creating landslides or rockfalls; and for repairing roads. Units should stock adequate quantities of easily transportable sizes of reinforcing mesh and other suitable materials for constructing gabions.

CLASS V: AMMUNITION

5-22. Because of terrain, ammunition resupply is difficult, making strict fire control and discipline an absolute necessity. Ammunition transfer points need to be as far forward as possible without revealing friendly unit locations or placing ammunition stocks at risk of capture or destruction. Direct delivery to the user may be required using aerial resupply. Innovation and flexibility are critical. In the mountains, the traditional mixes of tank ammunition may be less effective. Depending upon the specific threat, more rounds may be needed to attack light vehicles and fortified positions and less may be needed to engage tanks. Ammunition consumption for direct fire weapons may be low, however, consumption of indirect fire munitions, such as grenades, mortars, and artillery, may be high because of the dead space common to mountainous terrain. Planners must ensure that increased consumption of indirect fire munitions is included in computating required supply rates.

CLASS VII AND IX: MAJOR END ITEMS AND REPAIR PARTS

5-23. Rugged terrain and climate extremes cause an increase in repair parts consumption. However, overall vehicle utilization decreases in many situations. Because it is difficult to transport large end items to forward units, the commander must place additional emphasis on preventive maintenance and repair.

CLASS VIII: MEDICAL SUPPLIES

5-24. The medical platoon obtains medical supplies for the battalion from the supporting forward support medical company (FSMC) or similar task organized medical element. Medical supply organizations may distribute supply by various means: supply point distribution, unit distribution, or a combination of both. Mountainous terrain necessitates using supply point distribution to a great extent. Medical supply activities must maximize use of empty evacuation assets moving forward to execute unit distribution of supplies as often as possible. The terrain will severely constrain ground movement operations. Pre-planned unit distribution via air assets is a must for emergent situations, such as mass casualty scenarios. Medical supplies must have a high priority for movement. Distribution of Class VIII via air lines of communications (LOCs) should occur as often as tactically feasible.

SECTION III – TRANSPORTATION AND MAINTENANCE

5-25. Transportation assets for mountain operations are often limited, and their use requires sound planning. Although vehicles are used to move supplies as far forward as possible, they may not be able to reach deployed units. Using smaller cargo vehicles with improved cross-country mobility and

dedicated aircraft is paramount to sustaining units in the mountains. Locally obtained animals, indigenous personnel, or combat soldiers must often move supplies from roads and trails to unit positions. The poor quality of road networks requires increased engineer effort. The rugged mountain terrain aids in infiltration increasing security requirements along the route.

5-26. Air resupply should always be considered to reduce the transportation burden on ground assets. Therefore, support personnel should be well-trained in aerial resupply and sling-load operations. Aerial resupply, either by parachute drop, free drop, or cargo helicopter, may be available for a variety of tactical situations. However, unpredictable weather and air currents, cloud cover, and lack of suitable landing zones make aerial delivery unreliable, and higher elevations decrease overall aircraft lift capabilities. The integrated use of available helicopter transport should be used for forward transport of mail, replacements, returnees, and personnel service support providers, such as chaplains and finance support teams.

5-27. Fixing equipment as far forward as possible takes on added importance during mountain operations. In low mountains, equipment recovery and maintenance teams are critical in keeping limited routes clear and returning damaged vehicles to the battle in the shortest possible time. In high mountains, these teams are generally less critical to units operating there because terrain often limits vehicle use. Helicopter repair teams are critical in all mountainous environments due to helicopters flying at or near the maximum limits of their operational capabilities to meet increased needs for helicopter support. In all cases, maintenance turn-around time increases to compensate for fatigue and the other effects of the environment on maintenance personnel. Figure 5-3 lists some of the critical repair parts that often fail or require frequent replacement during mountain operations.

- **Tires**
- **Tracks**
- **NVG Batteries**
- **Communications Equipment**
- **Cooling Systems**

Figure 5-3. Key Repair Parts

5-28. Drivers well trained in proper maintenance and driving techniques eliminate a great deal of unnecessary maintenance and reduce maintenance requirements and vulnerable bottlenecks. All soldiers must devote increased attention to applicable FMs and TMs for their weapons and equipment and must conduct preventative maintenance, to include the availability and use of suitable cleaning solvents and lubricants, appropriate for the weather and terrain conditions.

SECTION IV – PERSONNEL SUPPORT

5-29. Personnel support in the mountains is not unlike that provided to other types of operations except for the limitations on soldiers and equipment posed by the environment. Key personnel support missions are to provide manning and personnel service support to unit commanders, soldiers, and Army civilians.

5-30. Personnel units normally depend on large quantities of automation equipment to successfully accomplish their mission. Adverse weather and rugged terrain may decrease their reliability and commanders should take extra precautions to protect this equipment. Additionally, the difficulty in establishing and maintaining communications may require an increased reliance on manual strength reporting until communications and automated systems are firmly established.

5-31. Postal services establish the link between soldiers and their family and friends and assist in defeating the isolation caused by the compartmented terrain and the resulting dispersion of units. However, the limited lines of communications in mountainous terrain may adversely affect mail distribution. Inefficient distribution of mail can quickly undermine morale, regardless of the AO. The timely delivery of mail is especially important in countering the shock of entering a new environment. Commanders should consider devoting a high priority to the distribution of mail on arrival in the theater of operations. FM 1-0 describes in detail the critical personnel systems and functions essential to providing manning and personnel service support.

SECTION V – COMBAT HEALTH SUPPORT

PLANNING

5-32. Combat health support (CHS) in the mountains is characterized by–

- Difficulty in accessing casualties in rugged terrain.
- Increased need for technical mountaineering skills for casualty evacuation.
- Longer periods of time needed for casualties to be stabilized.

5-33. When planning CHS, commanders must consider the tactical situation, the nature of the terrain, and speed of movement along the chain of evacuation. Aid stations should be centrally located in relation to supported units. The exact location should be based on the ability to provide shelter from the elements, cover and concealment from the enemy, ease of evacuation, and expected casualty rates.

5-34. The decentralization in the mountain area of operations also forces the decentralization of CHS. Commanders may need to establish casualty collection points, operated by aidmen from the evacuation section, to support isolated elements. These points are designated at intermediate points along the routes of evacuation where casualties may be gathered. Additionally, multiple ambulance exchange points may be required to transfer casualties from one type of transportation to another.

FM 3-0

Operations

JUNE 2001

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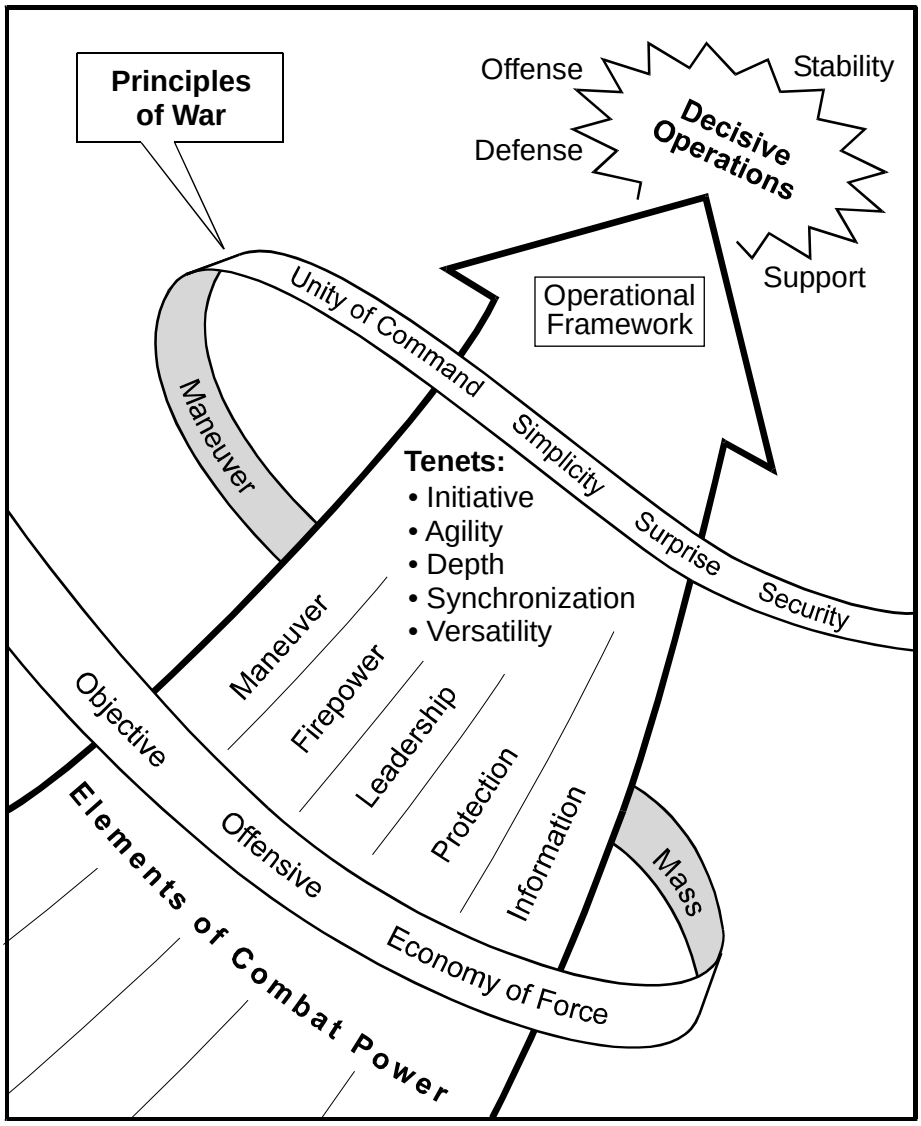


Figure 4-1. The Fundamentals of Full Spectrum Operations

THE ELEMENTS OF COMBAT POWER

4-3. The ability of Army forces to fight and win underlies success in all operations, whether lethal force is used or not. Combat power is the ability to fight. It is the total means of destructive or disruptive force, or both, that a military unit or formation can apply against the adversary at a given time. Commanders combine the elements of combat power—maneuver, firepower, leadership, protection, and information—to meet constantly changing requirements and defeat an enemy (see Figure 4-2, page 4-4). Defeating an enemy requires increasing the disparity between friendly and enemy forces by reducing enemy combat power. Commanders do this by synchronizing the elements of friendly force combat power to create overwhelming effects at the decisive time and place. Focused combat power ensures success and denies an enemy any chance to maintain coherent resistance. Massed effects created by

synchronizing the elements of combat power are the surest means of limiting friendly casualties and swiftly ending a campaign or operation.

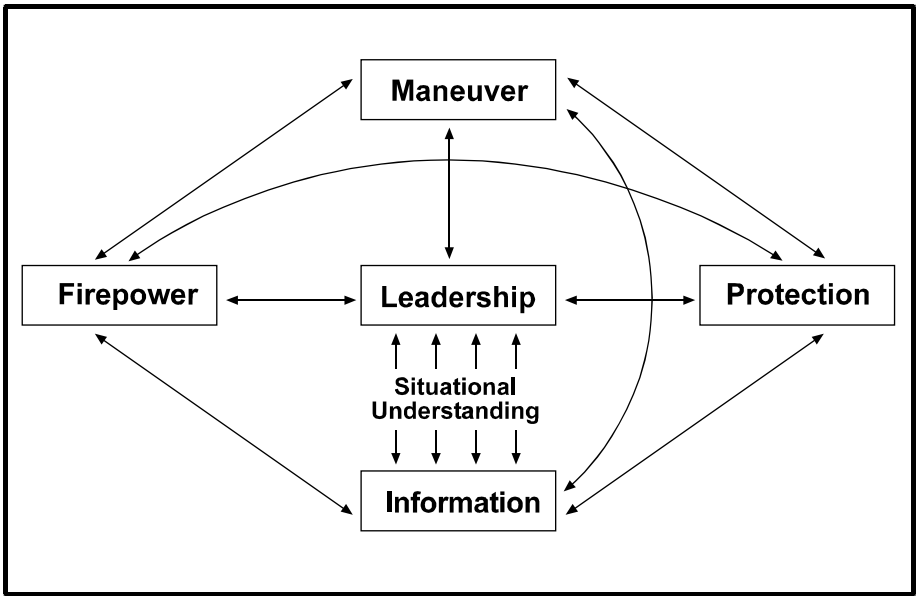


Figure 4-2. The Elements of Combat Power

MANEUVER

4-4. Maneuver is the employment of forces, through movement combined with fire or fire potential, to achieve a position of advantage with respect to the enemy to accomplish the mission. Maneuver is the means by which commanders concentrate combat power to achieve surprise, shock, momentum, and dominance.

Operational Maneuver

4-5. Operational maneuver involves placing Army forces and resources at the critical place in time to achieve an operational advantage. It is complex and often requires joint and multinational support. Deployment and intratheater movements are operational maneuver if they achieve a positional advantage and influence the outcome of a campaign or battle.

4-6. To achieve operational results, commanders seek operational advantages of position before combat begins and exploit tactical success afterwards. Ideally, operational maneuver secures positional advantage before an enemy acts and either preempts enemy maneuver or ensures his destruction if he moves. Operational movements and maneuver allow commanders to create the conditions they desire for battle and take full advantage of tactical actions. During Operation Desert Storm, for example, US Central Command (USCENTCOM) moved VII and XVIII Corps west of Kuwait to position them to envelop or turn the strongest Iraqi defenses. This undetected operational movement resulted in surprise at both the operational and tactical levels. This surprise, combined with rapid tactical movement and overwhelming combat power, resulted in the decisive defeat of the Iraqi army.

Tactical Maneuver

4-7. Tactical maneuver wins battles and engagements. By keeping the enemy off balance, it also protects the force. In both the offense and defense, it positions forces to close with and destroy the enemy. Effective tactical maneuver continually poses new problems for the enemy. It renders his reactions ineffective and eventually drives him to defeat.

4-8. In stability operations, effective tactical maneuver preempts adversary options. It concentrates friendly combat power where it can deter or reduce the effects of violence and places friendly forces in position to use firepower should combat follow. Tactical maneuver gives credibility to an operation by providing tangible evidence of Army force capabilities. In support operations, maneuver positions Army forces to apply their capabilities where they are needed.

Close Combat

4-9. Close combat is inherent in maneuver and has one purpose—to decide the outcome of battles and engagements. ***Close combat*** **is combat carried out with direct fire weapons, supported by indirect fire, air-delivered fires, and nonlethal engagement means. Close combat defeats or destroys enemy forces, or seizes and retains ground**. The range between combatants may vary from several thousand meters to hand-to-hand combat.

Close Combat at Landing Zone X-Ray

On 14 November 1965, soldiers from the 1st Battalion, 7th Cavalry engaged in close combat with North Vietnamese Army (NVA) forces in the Ia Drang Valley, Republic of Vietnam.

Specialist 5 Marlin T. Dorman recalled hugging the ground because "if you moved you got hit." He noted that "our training really showed then. We shifted into defensive positions. We had five men killed in 25 minutes. Then all of a sudden they [the NVA] tried a mass assault from three directions, rushing from bush to bush and laying fire on us. We put our M-16s on full automatic and killed most of them." Specialist 4 Galen Bungum added, "We gathered up all the full magazines we could find and stacked them up in front of us. There was no way we could dig a foxhole. The handle was blown off my entrenching tool and one of my canteens had a hole blown through it. The fire was so heavy that if you tried to raise up to dig you were dead. There was death and destruction all around."

On the third morning of heavy fighting, the NVA tried one last attempt to break through the battalion perimeter. Under the light of flares, the NVA massed 50 yards in front of the American positions and ran forward. The soldiers responded with air burst field artillery shells, mortar rounds, machine guns, and small arms. After 14 minutes of continuous combat, the NVA force broke off the attack and ended the three-day battle at Landing Zone X-Ray.

4-10. All tactical actions inevitably require seizing or securing terrain as a means to an end or an end in itself. Close combat is necessary if the enemy is skilled and resolute; fires alone will neither drive him from his position nor convince him to abandon his cause. Ultimately, the outcome of battles, major operations, and campaigns depends on the ability of Army forces to close with and destroy the enemy. During offensive and defensive operations, the certainty of destruction may persuade the enemy to yield. In stability operations, close combat dominance is the principal means Army forces use to influence adversary actions. In all cases, the ability of Army forces to engage in close combat, combined with their willingness to do so, is the decisive factor in defeating an enemy or controlling a situation.

FIREPOWER

4-11. Firepower provides the destructive force essential to overcoming the enemy's ability and will to fight. Firepower and maneuver complement each other. Firepower magnifies the effects of maneuver by destroying enemy forces and restricting his ability to counter friendly actions; maneuver creates the conditions for the effective use of firepower. Although one element might dominate a phase of an action, the synchronized effects of both are present in all operations. The threat of one in the presence of the other magnifies the impact of both. One without the other makes neither decisive. Combined, they make destroying larger enemy forces feasible and enhance protection of friendly forces.

4-12. Firepower is the amount of fires that a position, unit, or weapons system can deliver. Fires are effects of lethal and nonlethal weapons. Fires include fire support functions used separately from or in combination with maneuver. The extended range, capabilities, and accuracy of modern weapons systems (direct and indirect) and target acquisition systems make fires more lethal than ever before. These capabilities also allow commanders to create effects throughout the area of operations (AO). Commanders integrate and synchronize operational and tactical fires to accomplish their mission.

Operational Fires

4-13. ***Operational fires*** **are the operational-level commander's application of nonlethal and lethal weapons effects to accomplish objectives during the conduct of a campaign or major operation**. They are a vital component of any operational-level plan. Assets other than those supporting tactical maneuver normally furnish operational fires. Commanders direct operational fires against targets whose destruction or neutralization they expect to significantly affect a campaign or major operation. Planning operational fires includes allocating apportioned joint and multinational air, land, and sea means. Operational fires can be designed to achieve a single operational-level objective, for example, interdiction of major enemy forces to create the conditions for defeating them in detail.

4-14. Operational maneuver and operational fires may occur simultaneously but have very different objectives. In general terms, operational fires are not the same as fire support, and operational maneuver does not necessarily depend on operational fires. However, operational maneuver is most effective when commanders synchronize it with, and exploit opportunities developed

by, operational fires. Combining operational fires with operational maneuver generates asymmetric, enormously destructive, one-sided battles, as the Desert Storm ground offensive showed.

Tactical Fires

4-15. Tactical fires destroy or neutralize enemy forces, suppress enemy fires, and disrupt enemy movement. Tactical fires create the conditions for decisive close combat. Commanders take special care to synchronize fires with the effects of other systems. Massing maximum fires requires a thorough understanding of the commander's intent and the ability to employ all available means simultaneously against a variety of targets. The effective application of tactical fires relies on procedures for determining priorities; locating, identifying, and tracking targets; allocating firepower assets; and assessing effects. Effective fires demand well-trained, competently led units with a high degree of situational understanding.

Operational Maneuver and Fires—Operation Desert Storm

On 27 February 1991, Operation Desert Storm demonstrated how operational fires and maneuver can generate a one-sided, decisive battle. The campaign plan identified the Iraqi Army, a force whose elimination would decisively conclude the war, as the operational center of gravity.

XVIII Airborne Corps turned Objective Tim into Forward Operating Base Viper and launched two aviation brigades into Engagement Area Thomas, north of Basrah. There they destroyed over 80 Iraqi vehicles. To the south, the corps pushed eastward. They seized Jalibah Airfield and moved at speeds approaching 40 miles per hour as they overran and destroyed Iraqi forces.

After destroying the Iraqi Tawakalna mechanized and Medina armored divisions, VII Corps pressed an attack that destroyed more than 100 tanks and armored personnel carriers just short of the Kuwaiti border. British forces under operational control of the corps pressed the attack beyond the Basrah-Kuwait City highway to the coast. The remaining Iraqi forces fled encircling coalition forces for sanctuary across the Euphrates River.

LEADERSHIP

4-16. Because it deals directly with soldiers, leadership is the most dynamic element of combat power. Confident, audacious, and competent leadership focuses the other elements of combat power and serves as the catalyst that creates conditions for success. Leaders who embody the warrior ethos inspire soldiers to succeed. They provide purpose, direction, and motivation in all operations. Leadership is key, and the actions of leaders often make the difference between success and failure, particularly in small units.

4-17. The duty of every leader is to be competent in the profession of arms. Competence requires proficiency in four sets of skills: interpersonal, conceptual, technical, and tactical. Army leaders hone these skill sets through continual training and self-study (see FM 6-22).

4-18. Leaders instill their units with Army values, energy, methods, and will. The professional competence, personality, and will of strong commanders at all levels represent a significant part of every unit's combat power. All Army leaders must demonstrate strong character and high ethical standards. Leaders are soldiers first: they know and understand their subordinates and act with courage and conviction. During operations, they know where to be, when to make decisions, and how to influence the action.

4-19. Leaders build teamwork and trust. Trust is a key attribute in the human dimension of combat leadership. Soldiers must trust and have confidence in their leaders. Leaders must command the trust and confidence of their soldiers. Once trust is violated, a leader becomes ineffective. Trust encourages subordinates to seize the initiative. In unclear situations, bold leaders who exercise disciplined initiative within the commander's intent accomplish the mission.

PROTECTION

4-20. ***Protection*** **is the preservation of the fighting potential of a force so the commander can apply maximum force at the decisive time and place**. Protection is neither timidity, nor risk avoidance. The Army operates in tough, unforgiving environments where casualties occur. Full spectrum operations create an inherently tense relationship between accomplishing the mission and taking casualties. Accomplishing the mission takes precedence over avoiding casualties. However, soldiers are the most important Army resource, and excessive casualties cripple future mission accomplishment. Casualties from accident and disease are particularly galling. They contribute nothing to mission accomplishment and degrade unit effectiveness. Commanders are responsible for accomplishing the mission with the fewest friendly casualties feasible.

4-21. Protection has four components: force protection, field discipline, safety, and fratricide avoidance. Force protection, the primary component, minimizes the effects of enemy firepower (including weapons of mass destruction [WMD]), maneuver, and information. Field discipline precludes losses from hostile environments. Safety reduces the inherent risk of nonbattle deaths and injuries. Fratricide avoidance minimizes the inadvertent killing or maiming of soldiers by friendly fires.

Force Protection

4-22. ***Force protection*** **consists of those actions taken to prevent or mitigate hostile actions against DOD personnel (to include family members), resources, facilities, and critical information. These actions conserve the force's fighting potential so it can be applied at the decisive time and place and incorporates the coordinated and synchronized offensive and defensive measures to enable the effective employment of the joint force while degrading opportunities for the enemy. Force protection does not include actions to defeat the enemy or protect against accidents, weather, or disease**. It includes air, space, and missile defense; nuclear, biological, and chemical defense; antiterrorism; defensive information operations; and security to operational forces and means. The increased emphasis on force protection at every

echelon stems from the conventional dominance of Army forces. Often unable to challenge the Army in conventional combat, adversaries seek to frustrate Army operations by resorting to asymmetric means, weapons, or tactics. Force protection counters these threats.

4-23. Force protection at all levels minimizes losses to hostile action. Skillful and aggressive counterintelligence and threat assessments decrease the vulnerability of friendly forces. Effective operations security (OPSEC) keeps adversaries from exploiting friendly information. Proper dispersion helps reduce losses from enemy fires and terrorist action. Camouflage discipline, local security, and field fortifications do the same. Protection of electronic links and nodes, to include combat troops with electronic devices, is vital to protecting information, information systems, and soldiers. At the operational level, rear area and base security contributes to force protection. Air defense artillery forces protect installations and civilian populations from over-the-horizon strikes by conventional warheads and WMD. Army air and missile defense units complement the air component's control of the air. Nuclear, biological, and chemical (NBC) defense measures provide the capability to sustain operations in nuclear, biological, or chemical environments.

Field Discipline

4-24. Field discipline, a second component of protection, guards soldiers from the physical and psychological effects of the environment. Oppressive environments can sap soldier strength and morale far more quickly than enemy action. Soldiers can adapt to the point that they outperform indigenous populations; however, this adaptation can only stem from training in fieldcraft skills and thorough preparation.

Field Discipline—Preventive Medicine in Combat

In the 1898 war with Spain, the US mobilized the Army and sent soldiers to fight in Cuba, the Philippines, and Puerto Rico. Combat claimed 379 American lives. Well over 10 times that number were lost to disease. Almost 1,000 soldiers died from typhoid fever and diarrhea in crowded, filthy training camps in the US. Once in the tropics, malaria and yellow fever increased the disease-related deaths to several thousand. The resulting scandal led to efforts to reform the War Department.

Nearly a century after the Spanish-American War, the US conducted contingency operations in Panama (1989-90) and Haiti (1994-96). In both cases, combat casualties were minimal, while deaths from disease were nonexistent. Today, good leadership, the advanced state of medical knowledge, formalized measures designed to prevent disease, and first-rate medical treatment ensure that US troops sent overseas are among the healthiest in the world.

4-25. Commanders take every measure and precaution to keep soldiers healthy and maintain their morale. Such actions include securing equipment and supplies from loss or damage. Commanders ensure systems are in place for adequate combat health support (to include preventive medicine) and the

quick return of minor casualties. They provide effective systems for maintenance, evacuation, and rapid replacement or repair of equipment. Tactical commanders take care of their soldiers' basic health needs and prevent unnecessary exposure to debilitating conditions.

Safety

4-26. Safety is a third component of protection. Operational conditions often impose significant risks to soldiers' lives and health and make equipment operation difficult. Trained crews and operators must know the capabilities and limitations of their weapons systems. Commanders must know how to employ them. In designing operations, commanders consider the limits of human endurance. They balance the possible benefits of sustained, high-tempo operations with the risks involved. In combat, fatigue extends reaction times and reduces alertness. Fatal accidents, loss of combat power, and missed tactical opportunities may follow. Command attention to safety and high levels of discipline lessen those risks, particularly as soldiers become exhausted. Safe operations come from enforcing standards during training. While taking calculated risks is inherent in operations, commanders are obligated to embed safety in the conduct of all operations.

Fratricide Avoidance

4-27. A fourth component of protection is fratricide avoidance. ***Fratricide* is the unintentional killing or wounding of friendly personnel by friendly firepower**. The destructive power and range of modern weapons, coupled with the high intensity and rapid tempo of combat, increase the potential for fratricide. Tactical maneuvers, terrain, and weather conditions may also increase the danger of fratricide. Commanders seek to lower the probability of fratricide without discouraging boldness and audacity. Good leadership resulting in positive weapons control, control of troop movements, and disciplined operational procedures contributes to achieving this goal. Situational understanding and using friendly personnel and vehicle identification methods also help. Eliminating fratricide increases soldiers' willingness to act boldly, confident that misdirected friendly fires will not kill them.

INFORMATION

4-28. Information enhances leadership and magnifies the effects of maneuver, firepower, and protection. In the past, when forces made contact with the enemy, commanders developed the situation to gain information. Today, Army leaders use information collected by unmanned systems to increase their situational understanding before engaging the enemy. They also use offensive information operations (IO) to shape the operational environment and create the conditions for employing the other elements of combat power.

4-29. The common operational picture (COP) based on enhanced intelligence, surveillance, and reconnaissance (ISR) and disseminated by modern information systems provides commanders throughout the force with an accurate, near real-time perspective and knowledge of the situation. Information from the COP, transformed into situational understanding, allows commanders to combine the elements of combat power in new ways. For example, superior understanding of the situation allows commanders to avoid enemy

engagement areas, while concentrating fires and maneuver at the decisive place and time. This ability increases the survivability of the force without substantially increasing passive protective systems, such as armor. Modern information systems help leaders at all levels make better decisions faster. Better decisions rapidly communicated allow Army forces to mass the effects of combat power more rapidly and effectively than the enemy. This enables Army forces to see first, understand first, and act first.

4-30. Information is not neutral; opposing sides use it directly and indirectly to gain exploitable advantages and apply them against selected targets. Just as fires are synchronized and targeted, so is information. Some examples illustrate the use of information as an element of combat power: In 1989 during Operation Just Cause, and again in 1991 during Operation Desert Storm, psychological operations (PSYOP) units accompanied maneuver forces. In both conflicts, PYSOP, combined with the demonstrated destructive power of Army forces, convinced many enemy troops to surrender. In Operation Desert Storm, military deception (an element of offensive IO) resulted in the diversion of forces away from USCENTCOM's decisive operation.

Information Modernization—AH-64D Longbow

The AH-64D attack helicopter represents the wave of integrated digital weapons systems now entering service. The aircraft provides the commander with digital links to the ground and air situation. Its computer shares the situational picture with all other aircraft on the mission. The radar fire control system on the aircraft can scan, detect, and classify more than 128 targets, prioritize the 16 most dangerous ones, transmit the information to other aircraft, and initiate a precision attack—all in less than a minute.

4-31. Army forces are modernizing information systems to an unprecedented degree. This effort will have far-reaching effects on Army operations. The aim of these improvements is to provide all leaders with near real-time information that will allow them to understand the tactical situation and act within the commander's intent. This increased capability poses operational challenges. While subordinates have access to the broader tactical situation, commanders have access to layers of tactical detail. Higher-level commanders yielding to the temptation to direct minor tactical actions could reduce the benefits of advanced information systems and the situational understanding they support.

THE FOUNDATIONS OF ARMY OPERATIONS

4-32. Understanding the principles of war and tenets of Army operations is fundamental to operating successfully across the range of military operations. The principles of war and tenets of Army operations form the foundation of Army operational doctrine.

THE PRINCIPLES OF WAR

4-33. The nine principles of war provide general guidance for conducting war and military operations other than war at the strategic, operational, and

tactical levels. The principles are the enduring bedrock of Army doctrine. The US Army published its original principles of war after World War I. In the following years, the Army adjusted the original principles, but overall they have stood the tests of analysis, experimentation, and practice.

The Principles of War

- Objective
- Offensive
- Mass
- Economy of force
- Maneuver
- Unity of command
- Security
- Surprise
- Simplicity

4-34. The principles of war are not a checklist. They do not apply in the same way to every situation. Rather, they summarize the characteristics of successful Army operations. Their greatest value lies in the education of the military professional. Applied to the study of past campaigns, major operations, battles, and engagements, the principles of war are powerful tools for analysis.

Objective

Direct every military operation toward a clearly defined, decisive, and attainable objective.

No one starts a war—or rather, no one in his senses ought to do so—without first being clear in his mind what he intends to achieve by that war.

Clausewitz

4-35. At the operational and tactical levels, objective means ensuring all actions contribute to the goals of the higher headquarters. The principle of objective drives all military activity. When undertaking any mission, commanders should have a clear understanding of the expected outcome and its impact. At the strategic level, this means having a clear vision of the theater end state. This normally includes aspects of the political dimension. Commanders need to appreciate political ends and understand how the military conditions they achieve contribute to them.

4-36. Military leaders cannot divorce objective from considerations of restraint and legitimacy, particularly in stability operations and support operations. The amount of force used to obtain the objective must be prudent and appropriate to strategic aims. The military objective must also sustain the willing acceptance of a lawfully constituted agency, group, or government by the population in the AO. Without restraint or legitimacy, support for military action deteriorates and the objective becomes unobtainable.

4-37. To accomplish missions, commanders persevere. Offensive and defensive operations may swiftly create the conditions for short-term success, but protracted stability operations or support operations may be needed to cement lasting strategic objectives. Commanders balance a natural desire to enter the AO, quickly accomplish the mission, and depart with the broader requirements for incremental achievement of national goals and objectives.

Offensive

Seize, retain, and exploit the initiative.

4-38. Offensive action is key to achieving decisive results. It is the essence of successful operations. Offensive actions are those taken to dictate the nature, scope, and tempo of an operation. They force the enemy to react. Commanders use offensive actions to impose their will on an enemy, adversary, or situation. Offensive operations are essential to maintain the freedom of action necessary for success, exploit vulnerabilities, and react to rapidly changing situations and unexpected developments.

Mass

Concentrate the effects of combat power at the decisive place and time.

4-39. Commanders mass the effects of combat power to overwhelm enemies or gain control of the situation. They mass combat power in time and space to achieve both destructive and constructive results. Massing in time applies the elements of combat power against multiple targets simultaneously. Massing in space concentrates the effects of different elements of combat power against a single target. Both dominate the situation; commanders select the method that best fits the circumstances. To an increasing degree, joint and Army operations mass the full effects of combat power in both time and space, rather than one or the other. Such effects overwhelm the entire enemy defensive system before he can react effectively.

4-40. Army forces can mass effects without concentrating forces to a far greater extent than in the past. They can also mass effects more quickly. This does not imply that Army forces accomplish their missions with fires alone. Swift and fluid maneuver supported by situational understanding complement firepower. Often, this combination accomplishes in a single operation what formerly took an entire campaign.

4-41. Commanders mass the effects of combat power against a combination of elements critical to the enemy force to shatter its coherence. Some of these may be concentrated and vulnerable to operations that mass in both time and space. Others may spread throughout the AO, vulnerable only to simultaneous, nonlinear operations that mass in time only. Commanders combine simultaneous and sequential operations to mass effects in time and space.

Economy of Force

Allocate minimum essential combat power to secondary efforts.

4-42. Economy of force is the reciprocal of mass. It requires accepting prudent risk in selected areas to achieve superiority—overwhelming effects—in the decisive operation. Economy of force involves the discriminating employment and distribution of forces. Commanders never leave any element without a purpose. When the time comes to execute, all elements should have tasks to perform.

Maneuver

Place the enemy in a disadvantageous position through the flexible application of combat power.

4-43. As both an element of combat power and a principle of war, maneuver concentrates and disperses combat power to place and keep the enemy at a disadvantage. It achieves results that would otherwise be more costly. Effective maneuver keeps enemies off balance by making them confront new problems and new dangers faster than they can deal with them. Army forces gain and preserve freedom of action, reduce vulnerability, and exploit success through maneuver. Maneuver is more than just fire and movement. It includes the dynamic, flexible application of leadership, firepower, information, and protection as well. It requires flexibility in thought, plans, and operations and the skillful application of mass, surprise, and economy of force.

Unity of Command

For every objective, ensure unity of effort under one responsible commander.

4-44. Developing the full combat power of a force requires unity of command. Unity of command means that a single commander directs and coordinates the actions of all forces toward a common objective. Cooperation may produce coordination, but giving a single commander the required authority unifies action.

4-45. The joint, multinational, and interagency nature of unified action creates situations where the military commander does not directly control all elements in the AO. In the absence of command authority, commanders cooperate, negotiate, and build consensus to achieve unity of effort (see JP 3-0; FM 6-22).

Security

Never permit the enemy to acquire an unexpected advantage.

4-46. Security protects and preserves combat power. It does not involve excessive caution. Calculated risk is inherent in conflict. Security results from measures taken by a command to protect itself from surprise, interference, sabotage, annoyance, and threat ISR. Military deception greatly enhances security. The threat of asymmetric action requires emphasis on security, even in low-threat environments (see FM 3-13; FM 3-90; FM 3-07.2).

Surprise

Strike the enemy at a time or place or in a manner for which he is unprepared.

4-47. Surprise is the reciprocal of security. Surprise results from taking actions for which an enemy or adversary is unprepared. It is a powerful but temporary combat multiplier. It is not essential to take the adversary or enemy completely unaware; it is only necessary that he become aware too late to react effectively. Factors contributing to surprise include speed, information superiority, and asymmetry.

Simplicity

Prepare clear, uncomplicated plans and clear, concise orders to ensure thorough understanding.

4-48. Plans and orders should be simple and direct. Simple plans and clear, concise orders reduce misunderstanding and confusion. The factors of METT-TC determine the degree of simplicity required. Simple plans executed on time are better than detailed plans executed late. Commanders at all levels weigh the apparent benefits of a complex concept of operations against the risk that subordinates will not be able to understand or follow it.

4-49. Multinational operations put a premium on simplicity. Differences in language, doctrine, and culture complicate multinational operations. Simple plans and orders minimize the confusion inherent in this complex environment. The same applies to operations involving interagency and nongovernmental organizations.

THE TENETS OF ARMY OPERATIONS

4-50. The tenets of Army operations—initiative, agility, depth, synchronization, and versatility—build on the principles of war. They further describe the characteristics of successful operations. These tenets are essential to victory. While they do not guarantee success, their absence risks failure.

Initiative

4-51. Initiative has both operational and individual components. From an operational perspective, ***initiative*** **is setting or dictating the terms of action throughout the battle or operation**. Initiative implies an offensive spirit in all operations. To set the terms of battle, commanders eliminate or reduce the number of enemy options. They compel the enemy to conform to friendly operational purposes and tempo, while retaining freedom of action. Army leaders anticipate events throughout the battlespace. Through effective command and control (C2), they enable their forces to act before and react faster than the enemy does.

4-52. From an individual perspective, initiative is the ability to be a self-starter, to act when there are no clear instructions or when the situation changes. An individual leader with initiative is willing to decide and initiate independent actions when the concept of operations no longer applies or when an unanticipated opportunity leading to the accomplishment of the commander's intent presents itself (see FM 6-22). Despite advances in C2 from digital technology, individual initiative remains important for successful operations. In battle, leaders exercise this attribute when they act independently within the framework of the commander's intent. They trust their subordinates to do the same. Disciplined initiative requires well-trained and competent leaders who carry out studied and considered actions.

4-53. Initiative requires delegating decision making authority to the lowest practical level. Commanders give subordinates the greatest possible freedom to act. They encourage aggressive action within the commander's intent by issuing mission-type orders. Mission-type orders assign tasks to subordinates without specifying how to accomplish them (see FM 6-0). Such decentralization frees commanders to focus on the critical aspects of the overall operation.

Using mission-type orders requires individual initiative exercised by well-trained, determined, disciplined soldiers. It also requires leaders who trust their subordinates and are willing to take and underwrite risks.

4-54. In the offense, initiative involves throwing the enemy off balance with powerful, unexpected strikes. It implies never allowing the enemy to recover from the initial shock of an attack. To do this, commanders mass the effects of combat power and execute with speed, audacity, and violence. They continually seek vulnerable spots and shift their decisive operation when opportunities occur. To retain the initiative, leaders press the fight tenaciously and aggressively. They accept risk and push soldiers and systems to their limits. Retaining the initiative requires planning beyond the initial operation and anticipating possible events. The higher the echelon, the more possibilities the commander must anticipate and the further in advance the staff must plan.

4-55. In the defense, initiative implies quickly turning the tables on the attacker. It means taking aggressive action to collect information and force the attacker to reveal his intentions. Defenders aim to negate the attacker's initial advantages, gain freedom of action, and force the enemy to fight on the defender's terms. Once an enemy commits to a course of action, defending forces continue to seek offensive opportunities. They use maneuver and firepower to dictate the tempo of the fight and preempt enemy actions.

4-56. In stability operations, initiative contributes to influence over factions. It establishes conditions conducive to political solutions and disrupts illegal activities. For instance, commanders may establish conditions in which belligerent factions can best achieve their interests by remaining peaceful. Other examples of exercising initiative include defusing complicated crises, recognizing and preempting inherent dangers before they occur, and resolving grievances before they ignite open hostilities.

4-57. To gain and maintain the initiative in support operations, commanders develop a comprehensive understanding of the situation and anticipate requirements. Doing these things allows massing of resources to mitigate and prevent the effects of disasters. Commanders can then contribute to relieving suffering, managing consequences, and providing essential services.

Agility

4-58. ***Agility* is the ability to move and adjust quickly and easily**. It springs from trained and disciplined forces. Agility requires that subordinates act to achieve the commander's intent and fight through any obstacle to accomplish the mission.

4-59. Operational agility stems from the capability to deploy and employ forces across the range of Army operations. Army forces and commanders shift among offensive, defensive, stability, and support operations as circumstances and missions require. This capability is not merely physical; it requires conceptual sophistication and intellectual flexibility.

4-60. Tactical agility is the ability of a friendly force to react faster than the enemy. It is essential to seizing, retaining, and exploiting the initiative.

Agility is mental and physical. Agile commanders quickly comprehend unfamiliar situations, creatively apply doctrine, and make timely decisions.

Depth

4-61. ***Depth* is the extension of operations in time, space, and resources**. Commanders use depth to obtain space for effective maneuver, time to conduct operations, and resources to achieve and exploit success. Depth enables momentum in the offense, elasticity in the defense, and staying power in all operations.

4-62. In the offense and defense, depth entails attacking the enemy throughout the AO—simultaneously when possible, sequentially when necessary—to deny him freedom to maneuver. Offensive depth allows commanders to sustain momentum and press the fight. Defensive depth creates opportunities to maneuver against the enemy from multiple directions as attacking forces are exposed or discovered.

4-63. In stability operations and support operations, depth extends influence in time, space, purpose, and resources to affect the environment and conditions. In stability operations, ISR combined with IO help commanders understand factional motives, identify power centers, and shape the environment. In support operations, depth in resources, planning, and time allows commanders to stop suffering and prevent or slow the spread of disease.

4-64. In all operations, staying power—depth of action—comes from adequate resources. Depth of resources in quantity, positioning, and mobility is critical to executing military operations. Commanders balance depth in resources with agility. A large combat service support (CSS) tail can hinder maneuver, but inadequate CSS makes the force fragile and vulnerable.

Synchronization

4-65. ***Synchronization* is arranging activities in time, space, and purpose to mass maximum relative combat power at a decisive place and time**. Without synchronization, there is no massing of effects. Through synchronization, commanders arrange battlefield operating systems to mass the effects of combat power at the chosen place and time to overwhelm an enemy or dominate the situation. Synchronization is a means, not an end. Commanders balance synchronization against agility and initiative; they never surrender the initiative or miss a decisive opportunity for the sake of synchronization.

4-66. Some activities—such as electronic warfare, suppressing enemy air defenses, and shifting maneuver forces—might occur before the decisive operation. They may take place at locations distant from each other. Though separated in time and space, commanders closely synchronize such actions to mass overwhelming effects at the decisive time and place. Synchronization often requires explicit coordination and rehearsals among participants.

Versatility

4-67. ***Versatility* is the ability of Army forces to meet the global, diverse mission requirements of full spectrum operations**. Competence in a variety of missions and skills allows Army forces to quickly transition

from one type of operation to another with minimal changes to the deployed force structure. Versatility depends on adaptive leaders, competent and dedicated soldiers, and well-equipped units. Effective training, high standards, and detailed planning also contribute. Time and resources limit the number of tasks any unit can perform well. Within these constraints, commanders maximize versatility by developing the multiple capabilities of units and soldiers. Versatility contributes to the agility of Army units.

4-68. Versatility is a characteristic of multifunctional units. Commanders can take advantage of this by knowing each unit's capabilities and carefully tailoring forces for each mission. Military police, for example, can provide a mobile, lethal show of force, restore civil order, process detainees, and support peacekeeping operations. Engineer units can rebuild infrastructure, construct ports and base camps, and maintain lines of communications (LOCs). At higher echelons, versatility implies the ability to assume more complex responsibilities. For example, a corps headquarters can serve as an ARFOR headquarters or, with augmentation, a joint task force headquarters.

THE OPERATIONAL FRAMEWORK

4-69. **The *operational framework* consists of the arrangement of friendly forces and resources in time, space, and purpose with respect to each other and the enemy or situation. It consists of the area of operations, battlespace, and the battlefield organization.** The framework establishes an area of geographic and operational responsibility, and provides a way for commanders to visualize how to employ forces against the enemy. Commanders design an operational framework to accomplish their mission by defining and arranging its three components. They use the operational framework to focus combat power.

THEATER ORGANIZATION

4-70. The operational framework for Army forces rests within the combatant commander's theater organization. Combatant commanders with geographic responsibilities conduct operations within an area of responsibility (AOR) (theater) assigned by the Unified Command Plan. When warranted, they designate theaters of war, theaters of operations, combat zones, and a communications zone (COMMZ). Joint force commanders (JFCs) at all levels may establish subordinate operational areas (see Figure 4-3). Joint doctrine discusses the assignment and responsibilities associated with theater operational areas.

4-71. Either the National Command Authorities or a combatant commander may designate a theater of war. It is the area of air, land, and water that is, or may become, directly involved in the conduct of the war. A theater of war does not normally encompass a combatant commander's entire AOR and may contain more than one theater of operations. Combatant commanders typically assign theaters of operations to subordinate unified commanders.

4-72. A theater of operations is a subarea within a theater of war defined by a combatant commander required to conduct or support specific combat operations. Different theaters of operations within the same theater of war will normally be geographically separate and focused on different enemy

forces. Theaters of operations are usually of significant size, allowing for operations over extended periods of time.

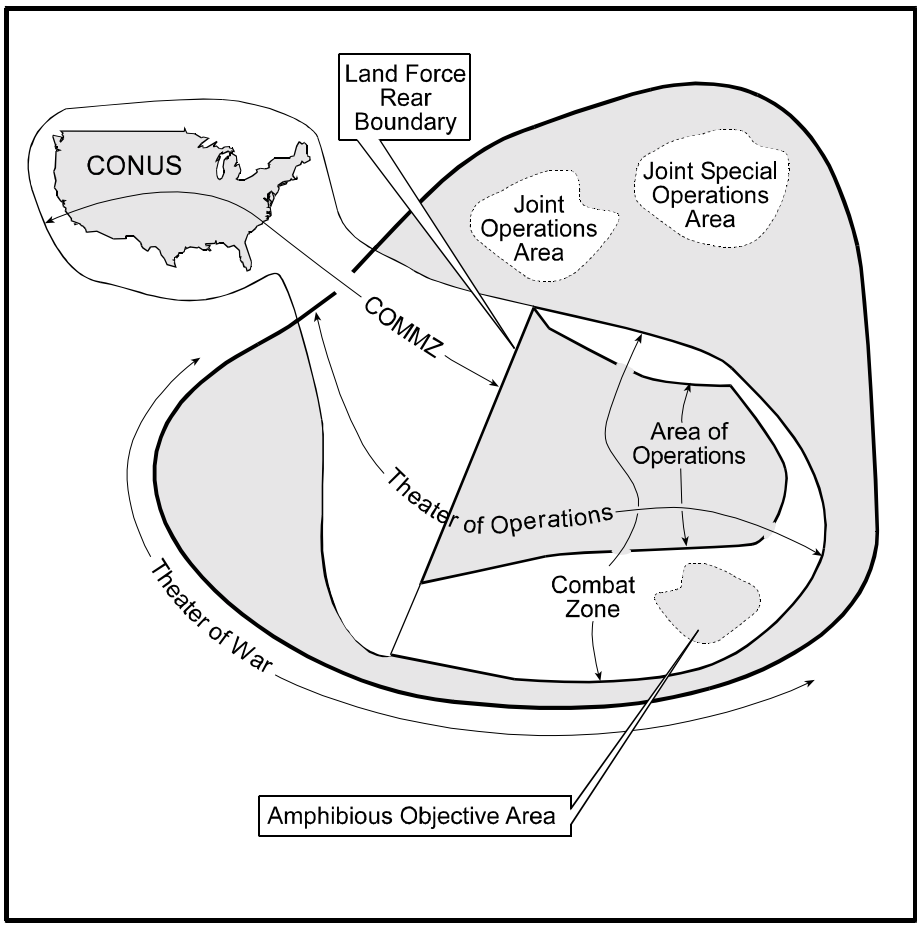


Figure 4-3. Theater Organization

4-73. A combat zone is that area required by combat forces for the conduct of operations. It normally extends forward from the land force rear boundary. The COMMZ is the rear part of theater of operations (behind but contiguous to the combat zone). It contains the LOCs, establishments for supply and evacuation, and other agencies required for the immediate support and maintenance of the field forces. It reaches back to the continental US, to a supporting combatant command AOR, or both.

AREA OF OPERATIONS

4-74. An AO is an operational area defined by the JFC for land and naval forces. AOs do not typically encompass the entire operational area of the JFC but should be large enough for component commanders to accomplish their missions and protect their forces. AOs should also allow component commanders to employ their organic, assigned, and supporting systems to the limits of their capabilities. Within their AOs, land and naval force commanders synchronize operations and are supported commanders.

4-75. Component commanders normally designate AOs for subordinate units. They use control measures to describe AOs and design them to fit the situation and take advantage of joint force capabilities. Commanders specify the minimum control measures necessary to focus combat power, delineate responsibilities, assign geographic responsibility, and promote unified action. At a minimum, control measures include boundaries on all sides of an AO (see FM 3-90). In linear operations, AOs require forward boundaries.

4-76. Commanders typically subdivide some or all of their AO by assigning AOs to subordinate units. Subordinate unit AOs may be contiguous or noncontiguous (see Figure 4-4). When AOs are contiguous, a boundary separates them. When AOs are noncontiguous, they do not share a boundary; the concept of operations links the elements of the force. The higher headquarters is responsible for the area between noncontiguous AOs.

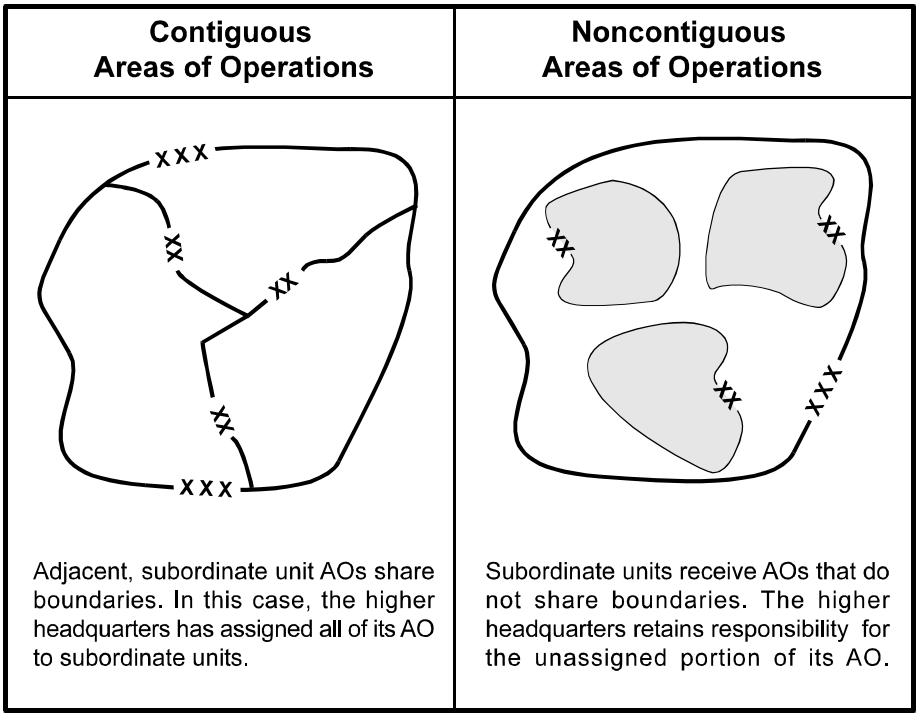


Figure 4-4. Contiguous and Noncontiguous Areas of Operations

BATTLESPACE

4-77. Battlespace is the environment, factors, and conditions commanders must understand to successfully apply combat power, protect the force, or complete the mission. This includes the air, land, sea, space, and the included enemy and friendly forces, facilities, weather, terrain, the electromagnetic spectrum, and the information environment within the operational areas and areas of interest (see Figure 4-5).

4-78. Battlespace is conceptual—a higher commander does not assign it. Commanders determine their battlespace based on their concept of operations, accomplishing the mission, and protecting the force. Commanders use

their experience, professional knowledge, and understanding of the situation to visualize and change their battlespace as current operations transition to future operations. Battlespace is not synonymous with AO. However, because battlespace is conceptual, Army forces conduct operations only within that portion of it delineated by their AO.

Areas of Influence and Interest

4-79. Battlespace has an associated area of influence and area of interest. An *area of influence* is a geographical area in which a commander can directly influence operations by maneuver or fire support systems normally under the commander's command or control. Areas of influence surround and include the associated AO. The extent of subordinate units' areas of influence normally guides higher commanders in assigning subordinate AOs. An AO should not be substantially larger than the unit's area of influence. An *area of interest* is that area of concern to the commander, including the area of influence and areas adjacent to it. It extends into enemy territory, to the objectives of current or planned operations. This area also includes areas occupied by enemy forces that could jeopardize the accomplishment of the mission. Areas of interest serve to focus intelligence development and IO directed at factors outside the AO that may affect the operation.

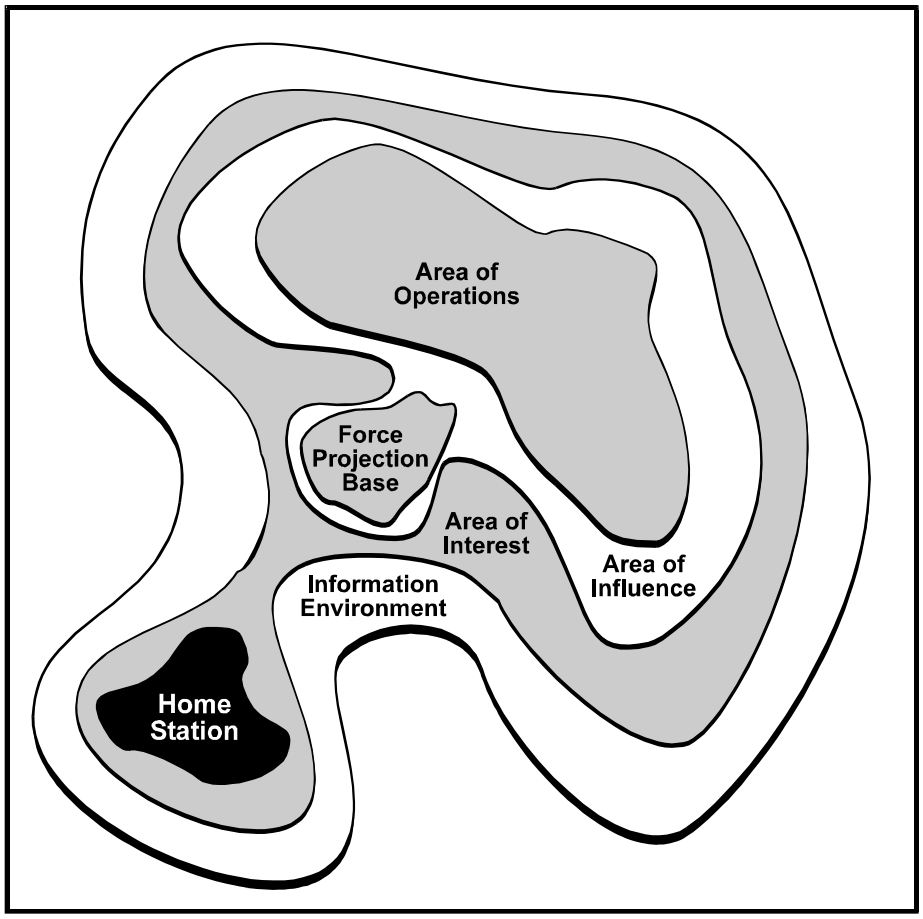


Figure 4-5. Battlespace Components

The Information Environment

4-80. A commander's battlespace includes that part of the information environment that encompasses information activity affecting the operation. The information environment contains information activities that collect, process, and disseminate information to national and international audiences but are beyond direct military influence. It includes space-based systems that provide data and information to Army forces. To envision that part of the information environment that is within their battlespace, commanders determine the information activities that affect their operation and the capabilities of their own and opposing C2 and information systems.

Force Projection Bases

4-81. Army forces may deploy from home station directly to the AO or may move to the AO through force projection bases. Intermediate staging bases and power projection platforms are force projection bases. Force projection bases influence operations in a fashion similar to home stations. Sometimes one part of the deploying force will be at the force projection base while another operates in the AO. The deployed force may receive combat support (CS) and CSS from the force projection base for some or all of the operation.

Home Station

4-82. Home stations are the permanent locations of active component (AC) units and reserve component (RC) units (for example, the location of an armory or reserve center). Because the Army is a power projection force, its AC units deploy from and return to home stations. RC forces normally mobilize and deploy from installations that serve as power projection platforms (see FM 3-100.22). Although home stations and power projection platforms lie outside the AO, the commander's battlespace includes them. Home stations provide support to deployed forces until they return. The ability to receive CS, CSS, and C2 support from home station assets reduces the size of the deployed force. To a significant degree, events occurring at home station affect the morale and performance of deployed forces. Thus, the commander's battlespace encompasses all home station functions, including family readiness programs.

BATTLEFIELD ORGANIZATION

4-83. As part of the military decision making process, commanders visualize their battlespace and determine how to arrange their forces. **The *battlefield organization* is the allocation of forces in the AO by purpose. It consists of three all-encompassing categories of operations: decisive, shaping, and sustaining.** Purpose unifies all elements of the battlefield organization by providing the common focus for all actions. Commanders organize forces according to purpose by determining whether each unit's operation will be decisive, shaping, or sustaining. These decisions form the basis of the concept of operations. When circumstances require a spatial reference, commanders describe the AO in terms of deep, close, and rear areas. These spatial categories are especially useful in operations that are generally contiguous and linear and feature a clearly defined enemy force.

Decisive Operations

4-84. ***Decisive operations*** **are those that directly accomplish the task assigned by the higher headquarters**. **Decisive operations conclusively determine the outcome of major operations, battles, and engagements.** There is only one decisive operation for any major operation, battle, or engagement for any given echelon. The decisive operation may include multiple actions conducted simultaneously throughout the AO. Commanders weight the decisive operation by economizing on combat power allocated to shaping operations.

4-85. In the offense and defense, decisive operations normally focus on maneuver. For example, Third Army's decisive operation in the Gulf War sent VII Corps against the Iraqi Republican Guard after a major shaping operation by the USCENTCOM air component. Conversely, CSS units may conduct the decisive operation during mobilization and deployment or in support operations, particularly if the mission is humanitarian.

Shaping Operations

4-86. ***Shaping operations*** **at any echelon create and preserve conditions for the success of the decisive operation.** Shaping operations include lethal and nonlethal activities conducted throughout the AO. They support the decisive operation by affecting enemy capabilities and forces, or by influencing enemy decisions. Shaping operations use all elements of combat power to neutralize or reduce enemy capabilities. They may occur before, concurrently with, or after the start of the decisive operation. They may involve any combination of forces and occur throughout the AO.

Sample Shaping Operations

- Economy of force actions
- Security Operations
- Actions designed to limit enemy freedom of action
- Actions to deny the enemy the ability to concentrate
- Attacks designed to fix enemy forces
- Destruction of enemy capabilities
- Information operations (including military deception)
- Covering force actions

4-87. Some shaping operations, especially those that occur simultaneously with the decisive operation, are economy of force actions. If the force available does not permit simultaneous decisive and shaping operations, the commander sequences shaping operations around the decisive operation. Regardless of the type of operation, commanders may designate a successful shaping operation as the decisive operation. In that case, commanders weight the new decisive operation with combat power from other shaping operations. The concept of operations clearly describes how shaping operations support the decisive operation.

4-88. Security operations are important shaping operations. They enable the decisive operation of the next higher headquarters and provide time and space for friendly forces to react to enemy activities. They also blind enemy

attempts to gain information on friendly forces and protect friendly forces from enemy observation and fires.

4-89. A reserve is a portion of a body of troops, kept to the rear or withheld from action at the beginning of an engagement and available for a decisive movement. Until committed, reserves shape through their placement within the AO. For example, the placement or movement of the reserve helps deceive the enemy as to the decisive operation and influences when the enemy commits forces. When committed, reserves either become or reinforce the decisive operation. Reserves prepare to seize and retain the initiative as a situation develops. Commanders use them to influence circumstances or exploit opportunities. When commanders anticipate uncertainty, they hold a greater portion of the force in reserve. Reserves reposition as necessary to ensure their protection and prompt availability.

Sustaining Operations

4-90. The purpose of sustaining operations is to generate and maintain combat power. ***Sustaining operations*** **are operations at any echelon that enable shaping and decisive operations by providing combat service support, rear area and base security, movement control, terrain management, and infrastructure development.** Sustaining operations include the following elements:

- **Combat service support** encompasses activities at all levels of war that generate and sustain combat power. It provides the essential capabilities and performs the functions, activities, and tasks necessary to sustain all forces in theater.
- **Rear area and base security** includes measures taken by military units, activities, and installations to protect themselves from acts designed to impair their effectiveness. It has four components: intelligence, base and base cluster self-defense, response force operations, and combined arms tactical combat force (TCF) operations (see FM 3-100.40).
- **Movement control** includes planning, routing, scheduling, and controlling personnel and materiel movements into, within, and out of an AO. Maintaining movement control, keeping LOCs open, managing reception and transshipment points, and obtaining host nation support are critical to movement control.
- **Terrain management** includes allocating terrain, designating assembly areas, and specifying locations for units and activities. It includes grouping units into bases and designating base clusters as necessary.
- **Infrastructure development** applies to all fixed and permanent installations, fabrications, or facilities that support and control military forces. Infrastructure development focuses on facility security modifications and includes area damage control and repairs.

A *tactical combat force* is a combat unit, with appropriate combat support and combat service support assets, that is assigned the mission of defeating level III threats.

4-91. While sustaining operations are inseparable from decisive and shaping operations, they are not usually decisive themselves. However, in some support operations, CSS forces may be the decisive element of the Army force. Sustaining operations occur throughout the AO, not just within a rear area. Failure to sustain normally results in mission failure. Sustaining operations determine how fast Army forces reconstitute and how far Army forces can exploit success.

4-92. At the operational level, sustaining operations focus on preparing for the next phase of the campaign or major operation. At the tactical level, sustaining operations underwrite the tempo of the overall operation; they assure the ability to take immediate advantage of any opportunity.

Main Effort

4-93. Within the battlefield organization of decisive, shaping, and sustaining operations, commanders designate and shift the main effort. **The *main effort* is the activity, unit, or area that commanders determine constitutes the most important task at that time**. Commanders weight the main effort with resources and priorities and shift it as circumstances and intent demand.

4-94. The main effort and the decisive operation are not always identical. Commanders anticipate shifts of main effort throughout an operation and include them in the plan. In contrast, changing the decisive operation requires execution of a branch, sequel, or new plan. A shaping operation may be the main effort before execution of the decisive operation. However, the decisive operation becomes the main effort upon execution.

Close, Deep, and Rear Areas

4-95. Despite the increasing nonlinear nature of operations, there may be situations where commanders describe decisive, shaping, and sustaining operations in spatial terms (see Figure 4-6, page 4-26). Typically, linear operations involve conventional combat and concentrated maneuver forces. Ground forces share boundaries and orient against a similarly organized enemy force. Terrain or friendly forces secure flanks and protect CSS operations. In some multinational operations, the capabilities and doctrine of partners may dictate spatial organization of the AO. In such situations, commanders designate close, deep, and rear areas.

4-96. **Close Areas**. When designated, **the *close area* is where forces are in immediate contact with the enemy and the fighting between the committed forces and readily available tactical reserves of both combatants is occurring, or where commanders envision close combat taking place**. **Typically, the close area assigned to a maneuver force extends from its subordinates' rear boundaries to its own forward boundary.** Commanders plan to conduct decisive operations through maneuver and fires in the close area and position most of the maneuver force within it.

4-97. The activities of forces directly supporting fighting elements also occur in the close area. Examples of these activities are field artillery fires and combat health support. Within the close area, depending on echelon, one unit

may conduct the decisive operation while others conduct shaping operations. Commanders of forces engaged in the close area may designate subordinate deep, close, and rear areas.

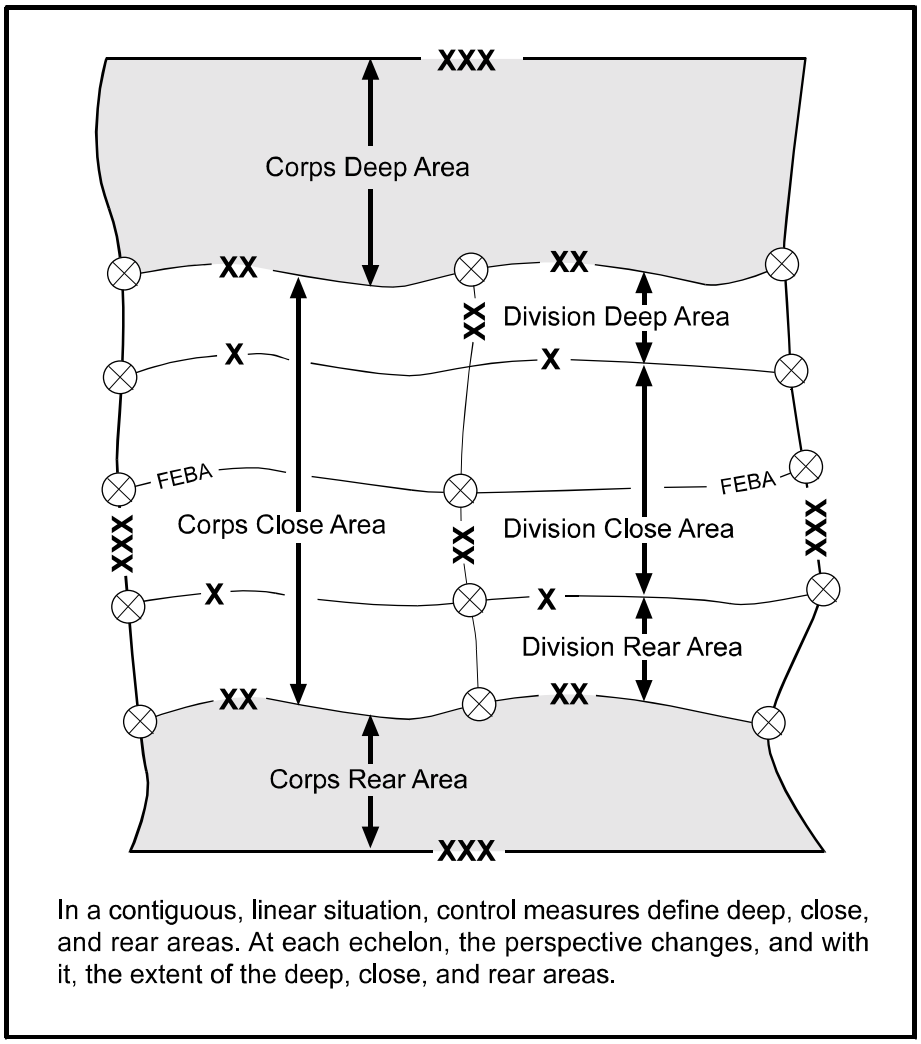


Figure 4-6. Close, Deep, and Rear Areas

4-98. **Deep Areas**. When designated, **the *deep area* is an area forward of the close area that commanders use to shape enemy forces before they are encountered or engaged in the close area**. **Typically, the deep area extends from the forward boundary of subordinate units to the forward boundary of the controlling echelon**. Thus, the deep area relates to the close area not only in terms of geography but also in terms of purpose and time. The extent of the deep area depends on the force's area of influence—how far out it can acquire information and strike targets. Commanders may place forces in the deep area to conduct shaping operations. Some of these operations may involve close combat. However, most maneuver forces stay in the close area.

4-99. **Rear Areas**. When designated, **the *rear area* for any command extends from its rear boundary forward to the rear boundary of the next lower level of command. This area is provided primarily for the performance of support functions and is where the majority of the echelon's sustaining operations occur**. Operations in rear areas assure freedom of action and continuity of operations, sustainment, and C2. Their focus on providing CS and CSS leaves units in the rear area vulnerable to attack. Commanders may designate combat forces to protect forces and facilities in the rear area. In some cases, commanders may designate a noncontiguous rear area due to geography or other circumstances. In this case, the rear area force protection challenge increases due to physical separation of forces in the rear area from combat units that would otherwise occupy a contiguous close area.

ARMY CAPABILITIES

4-100. Commanders combine AC and RC Army forces—consisting of different types of units with varying degrees of modernization—with multinational forces and civilian agencies to achieve effective and efficient unified action. A broad range of organizations makes up the institutional Army that supports the field Army. Institutional Army organizations design, man, train, and equip the force. The institutional Army assists effectively integrating Army capabilities. It does this through leadership and guidance regarding force structure, doctrine, modernization, and budget (see FM 3-100.11).

TASK ORGANIZATION

4-101. The Army supports JFCs by providing tailored force packages to accomplish joint missions and dominate enemies and situations on land. Trained and equipped AC and RC units comprise these force packages. Within these force packages, Army commanders organize groups of units for specific missions. They reorganize for subsequent missions when necessary. **This process of allocating available assets to subordinate commanders and establishing their command and support relationships is called *task organizing.* A temporary grouping of forces designed to accomplish a particular mission is a *task organization***. The ability of Army forces to tailor (select forces based upon a mission) and task organize (temporarily organize units to accomplish a tactical mission) gives them extraordinary agility. It allows operational- and tactical-level commanders to organize their units to make best use available resources. The ability to task organize means Army forces can shift rapidly among offensive, defensive, stability, and support operations.

COMBINED ARMS

4-102. The fundamental basis for the organization and operations of Army forces is combined arms. ***Combined arms* is the synchronized or simultaneous application of several arms—such as infantry, armor, field artillery, engineers, air defense, and aviation—to achieve an effect on the enemy that is greater than if each arm was used against the enemy separately or in sequence**. The ultimate goal of Army organization for operations remains success in joint and combined arms warfare. Its com-

bined arms capability allows commanders to form Army combat, CS, and CSS forces into cohesive teams focused on common goals.

IF RELATIONSHIP IS:		INHERENT RESPONSIBILITIES ARE:							
		Has Command Relationship with:	May Be Task Organized by:	Receives CSS from:	Assigned Position or AO By:	Provides Liaison To:	Establishes/ Maintains Communications with:	Has Priorities Established by:	Gaining Unit Can Impose Further Command or Support Relationship of:
COMMAND	**Attached**	Gaining unit	Gaining unit	Gaining unit	Gaining unit	As required by gaining unit	Unit to which attached	Gaining unit	Attached; OPCON; TACON; GS; GSR; R; DS
	OPCON	Gaining unit	Parent unit and gaining unit; gaining unit may pass OPCON to lower HQ. Note 1	Parent unit	Gaining unit	As required by gaining unit	As required by gaining unit and parent unit	Gaining unit	OPCON; TACON; GS; GSR; R; DS
	TACON	Gaining unit	Parent unit	Parent unit	Gaining unit	As required by gaining unit	As required by gaining unit and parent unit	Gaining unit	GS; GSR; R; DS
	Assigned	Parent unit	Parent unit	Parent unit	Gaining unit	As required by parent unit	As required by parent unit	Parent unit	Not Applicable
SUPPORT	**Direct Support (DS)**	Parent unit	Parent unit	Parent unit	Supported unit	Supported unit	Parent unit; Supported unit	Supported unit	Note 2
	Reinforcing (R)	Parent unit	Parent unit	Parent unit	Reinforced unit	Reinforced unit	Parent unit; reinforced unit	Reinforced unit: then parent unit	Not Applicable
	General Support Reinforcing (GSR)	Parent unit	Parent unit	Parent unit	Parent unit	Reinforced unit and as required by parent unit	Reinforced unit and as required by parent unit	Parent unit; then reinforced unit	Not Applicable
	General Support (GS)	Parent unit	Parent unit	Parent unit	Parent unit	As required by parent unit	As required by parent unit	Parent unit	Not Applicable

NOTE 1. In NATO, the gaining unit may not task organize a multinational unit (see TACON).

NOTE 2. Commanders of units in DS may further assign support relationships between their subordinate units and elements of the supported unit after coordination with the supported commander.

Figure 4-7. Army Command and Support Relationships and Inherent Responsibilities

ARMY COMMAND AND SUPPORT RELATIONSHIPS

4-103. Commanders build combined arms organizations using command and support relationships (see Figure 4-7). Command relationships define command responsibility and authority. Support relationships define the purpose, scope, and effect desired when one capability supports another.

COMPLEMENTARY AND REINFORCING EFFECTS

4-104. The services and the various arms within Army forces complement each other by posing a dilemma for the enemy. As the enemy evades the effects of one type of action, he exposes himself to destruction by another. This leads to enemy paralysis, destruction, or surrender. A tactical example of complementary effects is suppressing a defender with indirect fires while maneuvering to envelop and destroy him. If the enemy attempts to move to meet the threat, he risks destruction from the fires. If he remains in place to survive the fires, he risks being encircled and trapped.

4-105. *Complementary* capabilities protect the weaknesses of one system or organization with the capabilities of another (see Figure 4-8). For example, tanks combine protection, firepower, and mobility. However, they are vulnerable to mines, antiarmor missiles, concealed infantry, and restricted avenues of approach. They are particularly vulnerable in urban areas and dense vegetation. Therefore, commanders combine tanks, infantry, and engineers into combined arms teams and task forces. The infantry maneuvers on terrain where armor cannot and eliminates concealed threats to the tanks. The engineers clear obstacles, restoring the mobility of the armor. Unhindered by small arms fire, the armor maneuvers to deliver devastating firepower to

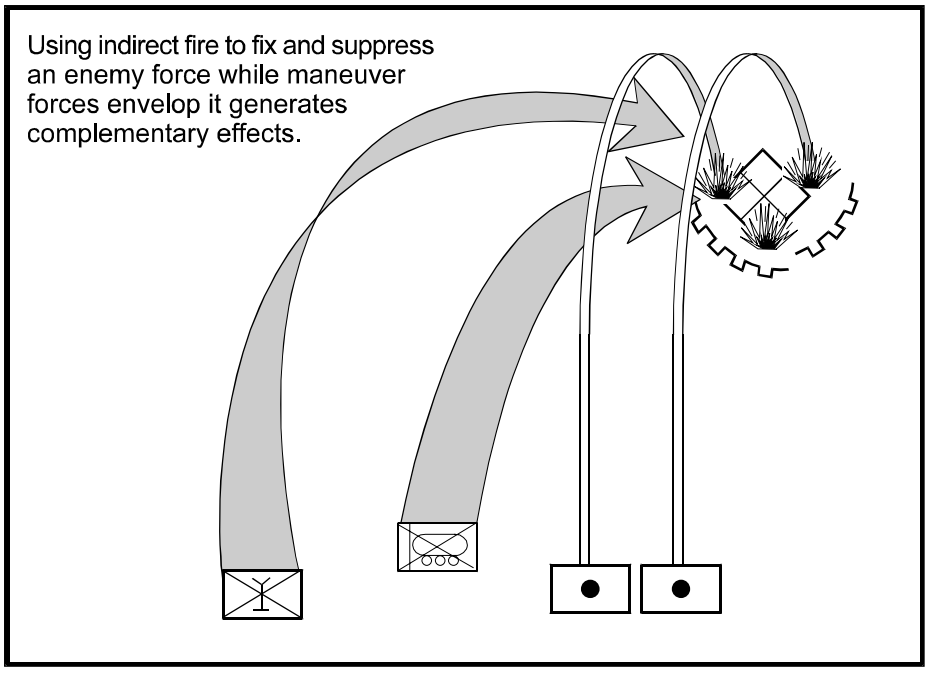
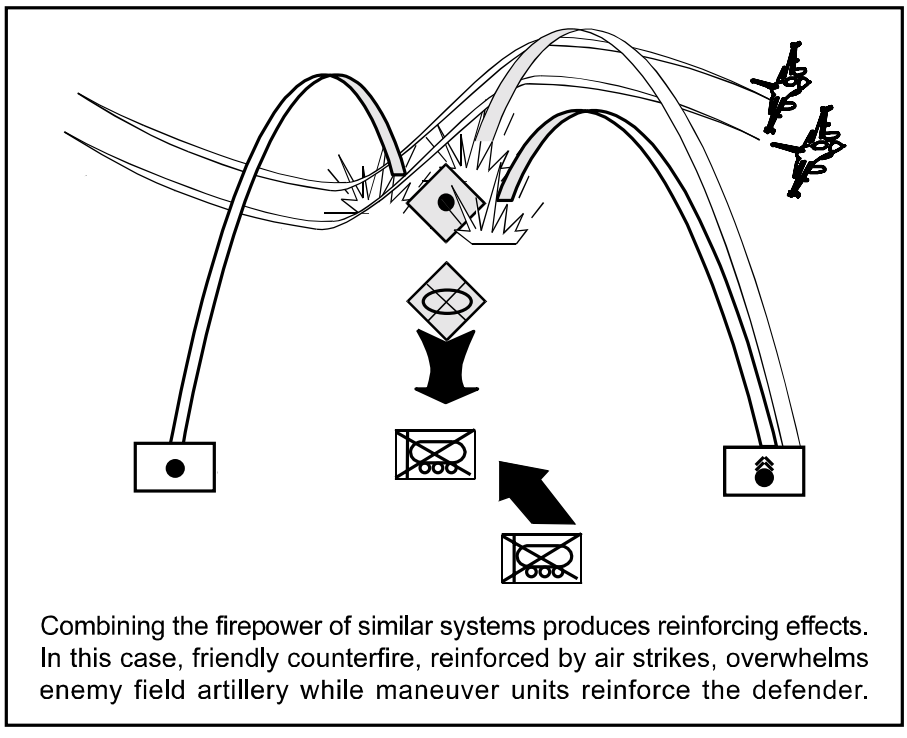

Using indirect fire to fix and suppress an enemy force while maneuver forces envelop it generates complementary effects.

Figure 4-8. Complementary Effects

support the infantry and engineers. CSS units support, providing the capabilities that the mix of systems requires.

4-106. At the operational level, the capabilities of the services complement each other. This situation provides JFCs with a wide range of options and confronts enemies with difficult dilemmas. Army, Navy, Marine, and Air Force aircraft engage targets that degrade enemy capabilities. Space, airborne, and land-based sensors monitor enemy reactions. Pilots and aviators use this information to refine and sharpen strikes. Ground forces maneuver, seize terrain, and destroy enemy forces. If the enemy attempts to meet the ground maneuver, he leaves his protected areas and exposes himself to the full weight of air power and long-range missiles. He is then even more vulnerable to the effects of maneuver. If the enemy attempts missile strikes on US air bases and lodgments, theater missile defenses, supported by space systems, intercept the weapons. As US ground forces maneuver, they overrun enemy air defenses, air bases, launch areas, command posts, and CSS units, eliminating both tactical and operational threats and rendering the enemy's situation hopeless.

4-107. Army forces and those of the other services *reinforce* each other when they combine the effects of similar capabilities (see Figure 4-9). Commanders reinforce to achieve focused, overwhelming effects at a single point. When massed, different types of field artillery systems, such as howitzers and missiles, reinforce each other. Aerial fires have similar effects and can reinforce indirect fires. In a similar manner, commanders reinforce maneuver elements to guarantee superiority at the decisive time and place.



Combining the firepower of similar systems produces reinforcing effects. In this case, friendly counterfire, reinforced by air strikes, overwhelms enemy field artillery while maneuver units reinforce the defender.

Figure 4-9. Reinforcing Effects

4-108. Achieving complementary and reinforcing effects requires synchronization, initiative, and versatility. Synchronized action is the basis for complementary and reinforcing effects. Commanders focus systems in space and time to generate synergy that increases effects. The initiative of leaders combines units and systems in the fluid circumstances of action, often in the absence of orders. Confronted with a constantly changing situation, leaders develop new combinations of systems and pose new dilemmas for the adversary. Properly combined, these effects produce asymmetries that the joint force uses to achieve theater objectives.

ASYMMETRY

4-109. Asymmetry concerns dissimilarities in organization, equipment, doctrine, capabilities, and values between other armed forces (formally organized or not) and US forces. JFCs arrange symmetrical and asymmetrical actions to take advantage of friendly strengths and enemy vulnerabilities, and to preserve freedom of action. Engagements are symmetric if forces, technologies, and weapons are similar; they are asymmetric if forces, technologies, and weapons are different, or if a resort to terrorism and rejection of more conventional rules of engagement are the norm. In one sense, there are always asymmetries between forces: differing circumstances lead to differing military structures. Asymmetry becomes very significant, perhaps decisive, when the degree of dissimilarity creates exploitable advantages. Asymmetric engagements can be extremely lethal, especially if the target is not ready to defend itself against the asymmetric threat. Asymmetry tends to decay over time as adversaries adapt to dissimilarities exposed in action. In a larger sense, asymmetric warfare seeks to avoid enemy strengths and concentrate comparative advantages against relative weaknesses. The following tactical and operational examples illustrate the dynamic nature of asymmetry.

4-110. Third Army forces in the Gulf War were equipped with second-generation thermal sights. Iraqi units depended upon older, far less capable active infrared and light amplification systems. In engagement after engagement, US, British, and French armor destroyed Iraqi units, who could only return ineffective fire. At the system level, the advanced armor on the US and British tanks resisted the occasional hit from Iraqi fire, while friendly rounds immediately destroyed their targets. At tactical levels, Army forces exploited asymmetry in terms of equipment and organization.

4-111. In 1999, Serbian forces in Kosovo faced unrelenting aerial bombardment by North Atlantic Treaty Organization (NATO) air forces. As the air operations intensified, NATO refined its strike techniques while the Serbs applied techniques learned by the Iraqis during the Gulf War. Over time, the Serbs became very proficient at using decoys and concealment. Although they were unable to prevent losses, Serbian units protected most of their ground combat systems from this asymmetric attack. Thus, the asymmetric advantage conferred by advanced air power over ground elements decayed over time.

4-112. At the operational level in the Gulf War, USCENTCOM exploited the inherent flexibility of sea power and amphibious assault to threaten the Iraqi forces in Kuwait with a major strike from the Persian Gulf. Lacking a navy,

the only possible operational response by the Iraqi high command was to shift six divisions to coastal defense. The coalition ground offensive enveloped and destroyed these Iraqi forces, which were fixed by the threat of amphibious assault.

4-113. The likelihood of asymmetric attack increases with the continued conventional dominance of US forces at sea, on land, in the air, and in space. Such attacks may only disrupt tactical activities briefly; however, the operational and strategic consequences, particularly in stability operations and support operations, may be far-reaching. In Beirut, Lebanon, in 1983, and again at Khobar Towers, Saudi Arabia, in 1996, massive truck bombs destroyed portions of US military compounds, with heavy loss of life. Both attacks demonstrated asymmetry in terms of equipment and values. In addition, each was a political act of terrorism taken against a military objective. The risks of asymmetry multiply with the threat of WMD.

4-114. Asymmetric attacks pose dilemmas to both friendly and enemy forces. Countering asymmetric attacks requires the disadvantaged side to alter rules of engagement, organization, doctrine, training, or equipment. The higher the echelon, the longer it takes to remedy an enemy asymmetric advantage. To reduce the vulnerability to asymmetric attacks and to minimize their effects, Army organizations, training, and equipment emphasize flexible employment in diverse situations. Protective measures, such as physical security and OPSEC, lessen the effects of asymmetry. A credible NBC defense capability at the tactical level deters the use of WMD. Commanders must anticipate asymmetries and take preventive measures that reduce adversary advantages. Commanders identify and exploit friendly capabilities that pose asymmetric challenges to the enemy force, even as Army forces act to counter hostile asymmetric threats.

Chapter 5

Battle Command

…[It is] essential that all leaders—from subaltern to commanding general—familiarize themselves with the art of clear, logical thinking. It is more valuable to be able to analyze one battle situation correctly, recognize its decisive elements and devise a simple, workable solution for it, than to memorize all the erudition ever written of war.

Infantry in Battle, 1939

5-1. Battle command applies the leadership element of combat power. It is principally an art that employs skills developed by professional study, constant practice, and considered judgment. Commanders, assisted by the staff, visualize the operation, describe it in terms of intent and guidance, and direct the actions of subordinates within their intent. Commanders direct operations in terms of the battlefield operating systems (BOS). They directly influence operations by personal presence, supported by their command and control (C2) system.

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THE ART OF COMMAND

5-2. Command is the authority a commander in military service lawfully exercises over subordinates by virtue of rank and assignment. Leaders possessing command authority strive to use it with firmness, care, and skill. Command remains a very personal function. As such, it is more an art than a science, although it exhibits characteristics of both.

5-3. ***Battle command*** **is the exercise of command in operations against a hostile, thinking enemy**. Skilled judgment gained from practice, reflection, study, experience, and intuition often guides it. The art of command lies in conscious and skillful exercise of command authority through

visualization, decision making, and leadership. Using judgment acquired from experience, training, study, and creative thinking, commanders visualize the situation and make decisions. In unclear situations, informed intuition may help commanders make effective decisions by bridging gaps in information. Through the art of command, commanders apply their values, attributes, skills, and actions to lead and motivate their soldiers and units. Well-led units succeed in training and accomplish their missions. As the senior leaders of organizations, commanders apply the leadership element of combat power. Subordinate commanders and small unit leaders reinforce it.

5-4. Effective battle command demands decisions that are both timely and more effective than those of the enemy. Success often depends on superior information that enables superior decisions. Effective decision making combines judgment with information as an element of combat power: it requires knowing if to decide, when to decide, and what to decide. It requires commanders to judge information quality. It also requires identifying important information and focusing subordinates and the staff on it. These are tactical, operational, and strategic judgments. Commanders anticipate and understand the activities that follow decisions, knowing that once executed, some commitments are irretrievable.

5-5. Battle command puts a premium on leader skills and actions that contribute to effective decisions. The volume of available information challenges all leaders. They assimilate enormous amounts of information as they visualize the operation, describe their intent, and direct their subordinates' actions. Visualizing the operation is continuous. It requires commanders to understand the current situation, broadly define the future situation, assess the difference between the two, and envision major actions that link them. Commanders accept calculated risks to seize and retain the initiative. They assess the tradeoff between risks and opportunities and apply it to their vision.

5-6. To translate the commander's vision into action, the staff and subordinates must understand it. Commanders describe their vision in succinct planning guidance and the commander's intent, providing enough detail to focus planning and preparation. To command is to direct. Commanders direct the outcome of major operations, battles, and engagements by—

- Assigning missions.
- Prioritizing and allocating resources.
- Assessing and taking risks.
- Deciding when and how to make adjustments.
- Committing reserves.
- Seeing, hearing, and understanding the needs of subordinates and superiors.
- Guiding and motivating the organization to accomplish the mission.

VISUALIZE, DESCRIBE, DIRECT

5-7. Visualizing, describing, and directing are aspects of leadership common to all commanders. Technology, the fluid nature of operations, and the volume of information increase the importance of commanders being able to visualize and describe operations. Commanders' perspective and the things

they emphasize change with echelon. Operational art differs from tactics principally in the scope and scale of what commanders visualize, describe, and direct. Operational commanders identify the time, space, resources, purpose, and action of land operations and relate them to the joint force commander's (JFC's) operational design. In contrast, tactical commanders begin with an area of operations (AO) designated, objectives identified, the purpose defined, forces assigned, sustainment allocated, and time available specified.

5-8. While JFCs and component commanders exercise leadership primarily through subordinates, small unit commanders command face to face. Operational success depends on the ability of operational commanders to visualize and describe complex land operations; tactical success depends on the ability of small unit commanders to motivate and direct soldiers.

5-9. Commanders use the factors of METT-TC to assess the situation. Staff estimates and collaborative information sharing among commanders refine and deepen their situational understanding. Commanders then visualize the operation, describe it within their intent, and direct their subordinates toward mission accomplishment. Depending on echelon, commanders examine the elements of operational design and determine factors that will shape the operation. Commanders direct operations and synchronize the BOS through plans and orders. They personally apply the leadership element of combat power through their presence and priorities (see Figure 5-1, page 5-4).

VISUALIZE

5-10. Upon receipt of a mission, commanders consider their battlespace and conduct a mission analysis that results in their initial vision, which they continually confirm or modify. Commanders use the factors of METT-TC, elements of operational design, staff estimates, input from other commanders, and their experience and judgment to develop their vision.

5-11. To visualize the desired outcome, commanders must clearly understand the situation in the battlespace: What is the mission? What are the enemy's capabilities and likely actions? What are the characteristics of the AO? Do weather and terrain favor friendly or enemy actions? How much time is available? What combat service support (CSS) factors are most important? What role do civil considerations play? This framing of the battlespace takes place during mission analysis (see FM 5-0). Additionally, commanders draw on the principles of war, tenets of operations, and their experience.

The Factors of METT-TC

5-12. METT-TC refers to factors that are fundamental to assessing and visualizing: Mission, Enemy, Terrain and weather, Troops and support available, Time available, and Civil considerations. The first five factors are not new. However, the nature of full spectrum operations requires commanders to assess the impact of nonmilitary factors on operations. Because of this added complexity, *civil considerations* has been added to the familiar METT-T to form METT-TC. All commanders use METT-TC to start their visualization. Staff estimates may address individual elements of, and add to, the commander's visualization.

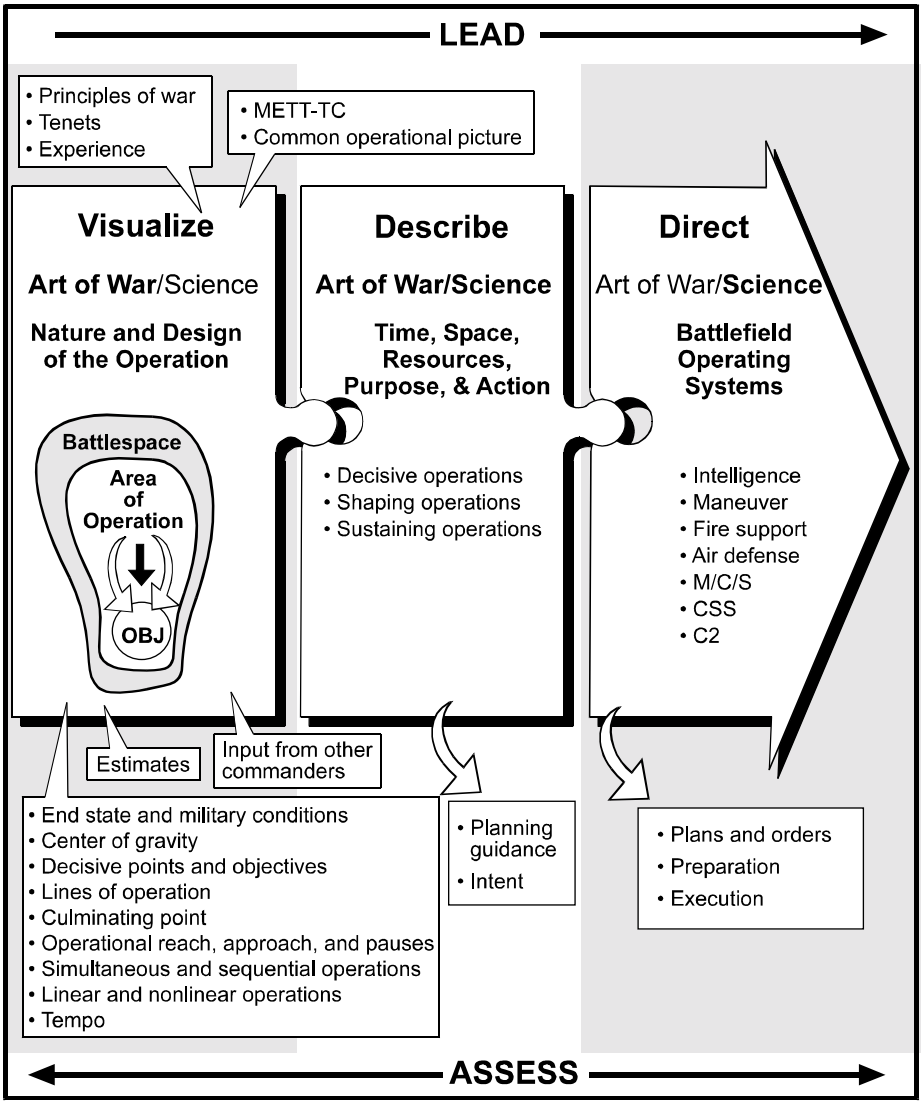

Figure 5-1. Visualize, Describe, Direct

5-13. **Mission**. Commanders determine the mission through analysis of the tasks assigned. The results of that analysis yield the essential tasks that, together with the purpose of the operation, clearly indicate the action required. The mission includes what tasks must be accomplished; who is to do them; and when, where, and why the tasks are to be done.

5-14. **Enemy**. The analysis of the enemy includes current information about his strength, location, activity, and capabilities. Commanders and staffs also assess the most likely enemy courses of action. In stability operations and support operations, the analysis includes adversaries, potentially hostile parties, and other threats to success. Threats may include the spread of infectious disease, regional instabilities, or misinformation. Commanders consider asymmetric as well as conventional threats.

5-15. **Terrain and Weather**. Analysis of terrain and weather helps commanders determine observation and fields of fire, avenues of approach, key terrain, obstacles and movement, and cover and concealment (OAKOC [see FM 6-0]). Terrain includes manmade features such as cities, airfields, bridges, railroads, and ports. Weather and terrain also have pronounced effects on ground maneuver, precision munitions, air support, and CSS operations. The nature of operations extends the analysis of the natural environment (weather and terrain) into the context of the physical environment of a contaminated battlefield. To find tactical advantages, commanders and staffs analyze and compare the limitations of the environment on friendly, enemy, and neutral forces.

5-16. **Troops and Support Available**. Commanders assess the quantity, training level, and psychological state of friendly forces. The analysis includes the availability of critical systems and joint support. Commanders examine combat, combat support (CS), and CSS assets. These assets include contractors (see FM 3-100.21).

5-17. **Time Available**. Commanders assess the time available for planning, preparing, and executing the mission. They consider how friendly and enemy or adversary forces will use the time and the possible results. Proper use of the time available can fundamentally alter the situation. Time available is normally explicitly defined in terms of the tasks assigned to the unit and implicitly bounded by enemy or adversary capabilities.

> *You can ask me for anything you like, except time...*
>
> Napoleon

5-18. **Civil Considerations**. Civil considerations relate to civilian populations, culture, organizations, and leaders within the AO. Commanders consider the natural environment, to include cultural sites, in all operations directly or indirectly affecting civilian populations. Commanders include civilian political, economic, and information matters as well as more immediate civilian activities and attitudes.

5-19. At the operational level, civil considerations include the interaction between military operations and the other instruments of national power. Civil considerations at the tactical level generally focus on the immediate impact of civilians on the current operation; however, they also consider larger, long-term diplomatic, economic, and informational issues. Civil considerations can tax the resources of tactical commanders while shaping force activities. Civil considerations define missions to support civil authorities.

5-20. Political boundaries of nations, provinces, and towns are important civil considerations. Conflict often develops across boundaries, and boundaries may impose limits on friendly action. Boundaries, whether official or not, determine which civilian leaders and institutions can influence a situation. These considerations can be important at all levels.

5-21. Media presence guarantees that a global audience views US military activities in near real-time. Commanders factor public opinion into their vision of the battlespace. The activities of the force—including individual soldiers—can have far reaching effects on domestic and international opinion. The media also affect activities and opinions within the AO and often prove a valuable information resource.

5-22. The local population and displaced persons influence commanders' decisions. Their presence and the need to address their control, protection, and welfare affect the choice of courses of action and the allocation of resources. In stability operations and support operations, these people are a central feature of AOs.

The Elements of Operational Design

5-23. A major operation begins with a design—an idea that guides the conduct (planning, preparation, execution, and assessment) of the operation. The operational design provides a conceptual linkage of ends, ways, and means. The elements of operational design are tools to aid designing major operations. They help commanders visualize the operation and shape their intent.

Elements of Operational Design

- End state and military conditions
- Center of gravity
- Decisive points and objectives
- Lines of operation
- Culminating point
- Operational reach, approach, and pauses
- Simultaneous and sequential operations
- Linear and nonlinear operations
- Tempo

5-24. The elements of operational design are most useful in visualizing major operations. They help clarify and refine the vision of operational-level commanders by providing a framework to describe operations in terms of task and purpose. They help commanders understand the complex combinations of combat power involved. However, their usefulness and applicability diminishes at each lower echelon. For example, senior tactical commanders must translate the operational commander's operational reach and culminating point into a limit of advance for ground forces. Decisive points become geographic or force-oriented objectives. Senior tactical commanders normally consider end state, decisive points and objectives, culminating point, simultaneous and sequential operations, linear and nonlinear operations, and tempo. However, their subordinates at the lowest tactical echelons may only consider objectives.

5-1. **End State and Military Conditions**. At the strategic level, the end state is what the National Command Authorities want the situation to be when operations conclude—both those where the military is the primary instrument of national power employed and those where it supports other instruments. It marks the point when military force is no longer the principal strategic means. **At the operational and tactical levels, the *end state* is the conditions that, when achieved, accomplish the mission**. **At the operational level, these conditions attain the aims set for the campaign or major operation**.

5-26. JFCs establish the end state for campaigns or joint major operations and set the military conditions necessary to accomplish them. Army operations at the theater level focus on achieving the military conditions on land necessary to achieve the JFC's objectives and end state. In situations where military force is employed with nonmilitary means, commanders designate measures of effectiveness to focus military action. In many operations—particularly short-notice, smaller-scale contingencies—the end state

and supporting military conditions may be poorly defined or entirely absent. In other operations, the end state may be vague or evolving. Therefore, commanders at all levels monitor and assess progress toward the end state. Operational commanders continuously assess the major operation and campaign objectives against measures of effectiveness and the strategic end state.

5-27. **Center of Gravity**. Centers of gravity are those characteristics, capabilities, or localities from which a military force derives its freedom of action, physical strength, or will to fight. Destruction or neutralization of the enemy center of gravity is the most direct path to victory. The enemy will recognize and shield his center of gravity. Therefore, a direct approach may be costly and sometimes futile. Commanders examine many approaches, direct and indirect, to the enemy center of gravity.

5-28. The center of gravity is a vital analytical tool in the design of campaigns and major operations. Once identified, it becomes the focus of the commander's intent and operational design. Senior commanders describe the center of gravity in military terms, such as objectives and missions.

5-29. Commanders not only consider the enemy center of gravity, but also identify and protect their own center of gravity. During the Gulf War, for example, US Central Command identified the coalition itself as the friendly center of gravity. The combatant commander took measures to protect it, including deployment of theater missile defense systems.

5-30. **Decisive Points and Objectives**. **A *decisive point* is a geographic place, specific key event, or enabling system that allows commanders to gain a marked advantage over an enemy and greatly influence the outcome of an attack**. Decisive points are not centers of gravity; they are keys to attacking or protecting them. Normally, a situation presents more decisive points than the force can control, destroy, or neutralize with available resources. Part of operational art consists of selecting the decisive points that will most quickly and efficiently overcome the enemy center of gravity. Decisive points shape operational design and allow commanders to select objectives that are clearly defined, decisive, and attainable.

5-31. Some decisive points are geographic, for example, a port facility, transportation network or node, or base of operations. Other physical decisive points include elements of an enemy force, such as units, command posts, fire support units capable of delivering weapons of mass destruction (WMD), or important communications sites. Events, such as commitment of the enemy operational reserve, may also be decisive points. Once identified and selected for action, decisive points become objectives.

5-32. Decisive points may have a different character in support missions and stability operations. During hurricane relief efforts in Florida, for example, the Joint Task Force Andrew commander identified the reopening of public schools as a decisive point. This decisive point was physical in nature, but its real value was psychological. Reopening schools signaled to residents that they were on their way to recovery.

5-33. **Lines of Operations. *Lines of operations* define the directional orientation of the force in time and space in relation to the enemy. They connect the force with its base of operations and its objectives**.

In geographic terms, lines of operations connect a series of decisive points that lead to control of the objective or defeat of the enemy force.

5-34. An operation may have single or multiple lines of operation. A single line of operations concentrates forces and simplifies planning. Multiple lines of operations increase flexibility and create several opportunities for success. Multiple lines of operations make it difficult for an enemy to determine the friendly objectives and force him to disperse resources against several possible threats. Each potential option further complicates the enemy's situation and stresses his C2 system. The strategic responsiveness and tactical agility of Army forces create opportunities for simultaneous operations along multiple lines of operations.

5-35. Lines of operations may be either interior or exterior (see Figure 5-2). **A force operates on *interior lines* when its operations diverge from a central point**. With interior lines, friendly forces are closer to separate enemy forces than the enemy forces are to each other. Interior lines allow a weaker force to mass combat power against a portion of the enemy force by shifting resources more rapidly than the enemy. **A force operates on *exterior lines* when its operations converge on the enemy**. Operations on exterior lines offer the opportunity to encircle and annihilate a weaker or less mobile enemy; however, they require stronger or more mobile forces.

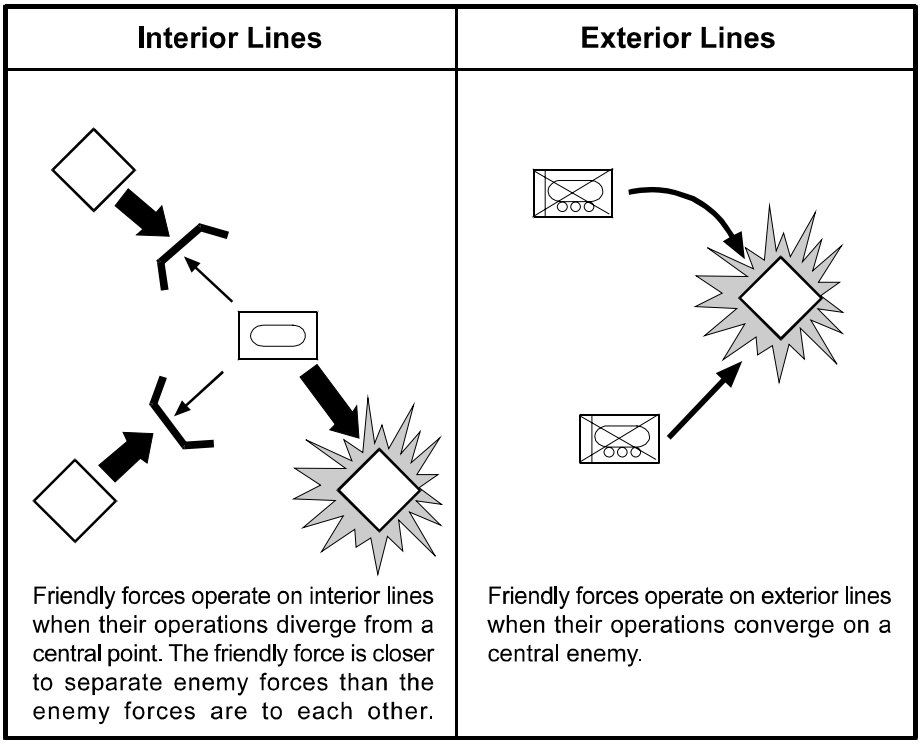
Interior Lines
Exterior Lines
Friendly forces operate on interior lines when their operations diverge from a central point. The friendly force is closer to separate enemy forces than the enemy forces are to each other.
Friendly forces operate on exterior lines when their operations converge on a central enemy.

Figure 5-2. Interior and Exterior Lines of Operations

5-36. The relevance of interior and exterior lines depends on the relationship of time and distance between the opposing forces. An enemy force may have interior lines with respect to the friendly force; however, that advantage

disappears if the friendly force is more agile and operates at a higher tempo. Conversely, if a smaller friendly force maneuvers to a position between larger but less agile enemy forces, the friendly force may defeat them in detail before they can react effectively.

5-37. When positional reference to an enemy or adversary has little relevance, commanders may visualize the operation along *logical lines* (see Figure 5-3). This situation is common in stability operations and support operations. Commanders link multiple objectives and actions with the logic of purpose—cause and effect. In a linkage between objectives and forces, only the logical linkage of lines of operations may be evident. Multiple and complementary lines of operations work through a series of objectives. Commanders synchronize activities along multiple lines of operation to achieve the desired end state. Logical lines of operations also help commanders visualize how military means can support nonmilitary instruments of national power.

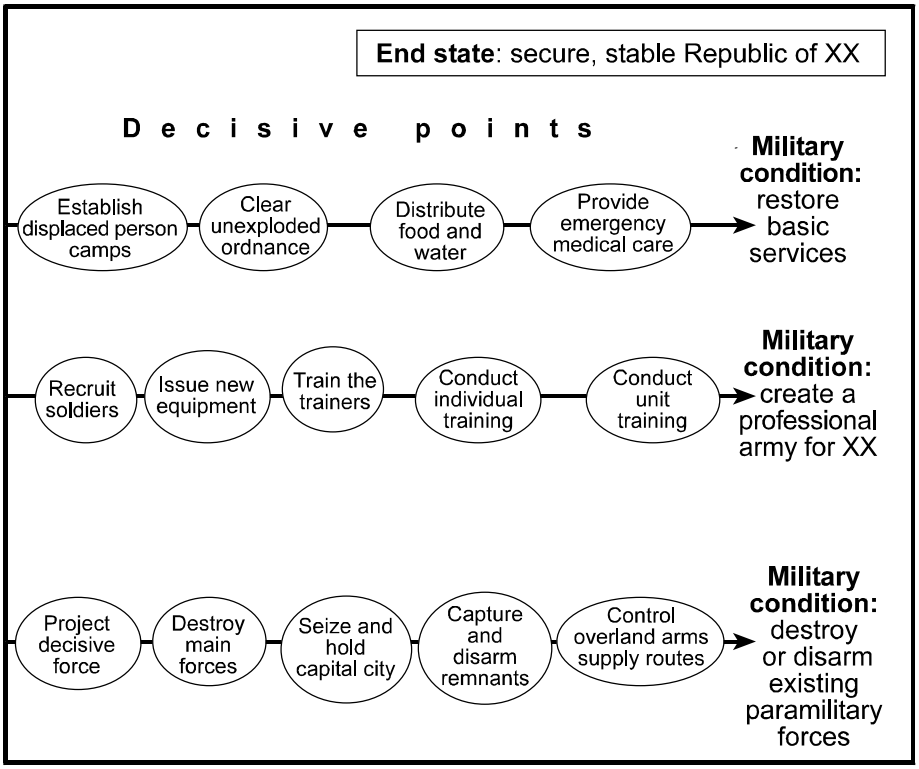
End state: secure, stable Republic of XX
Decisive points
Establish displaced person camps
Clear unexploded ordnance
Distribute food and water
Provide emergency medical care
Military condition: restore basic services
Recruit soldiers
Issue new equipment
Train the trainers
Conduct individual training
Conduct unit training
Military condition: create a professional army for XX
Project decisive force
Destroy main forces
Seize and hold capital city
Capture and disarm remnants
Control overland arms supply routes
Military condition: destroy or disarm existing paramilitary forces

Figure 5-3. Logical Lines of Operations

5-38. **Culminating Point**. Culminating point has both operational and tactical relevance. **In the offense, the *culminating point* is that point in time and space where the attacker's effective combat power no longer exceeds the defender's or the attacker's momentum is no longer sustainable, or both**. Beyond their culminating point, attackers risk counterattack and catastrophic defeat and continue the offense only at great peril. Defending forces reach their culminating point when they can no longer defend successfully or counterattack to restore the cohesion of the

defense. **The defensive culminating point marks that instant at which the defender must withdraw to preserve the force**. Commanders tailor their information requirements to anticipate culmination early enough to either avoid it or, if avoiding it is not possible, place the force in the strongest possible posture.

5-39. In operations where stability or support predominate, culmination may result from the erosion of national will, decline of popular support, questions concerning legitimacy or restraint, or lapses in protection leading to excessive casualties. Operational culmination in a stability or support mission usually occurs when the force is spread too thinly to control the situation, from a lack of resources, or from the inability to supply resources when needed. Then small failures may cascade into larger defeats, shocks in the political arena, or inability to provide the necessary support.

5-40. **Operational Reach, Approach, and Pauses.** Good operational design balances operational reach, operational approach, and operational pauses to ensure the force achieves its objectives before it culminates. Commanders carefully assess the physical and psychological condition of friendly and enemy forces, anticipate culmination, and plan operational pauses if necessary. They commit the required forces and conduct operational risk assessments. Commanders aim to extend operational reach while avoiding culmination and operational pauses.

5-41. ***Operational reach*** **is the distance over which military power can be employed decisively**. It is a tether. Operational reach varies based on the situation. Combat power, sustainment capabilities, and the geography surrounding and separating friendly and enemy forces all influence it. Army forces extend their operational reach by locating forces, reserves, bases, and support forward; by increasing the range of weapons systems; through supply discipline; and by improving lines of communications (LOCs).

5-42. ***Operational approach*** **is the manner in which a commander attacks the enemy center of gravity. The** ***direct approach*** **applies combat power directly against the enemy center of gravity or the enemy's principal strength. The** ***indirect approach*** **attacks the enemy center of gravity by applying combat power against a series of decisive points that avoid enemy strengths**. When possible, commanders choose an indirect approach: they maneuver to avoid enemy strengths and degrade enemy capabilities; they refuse combat when the situation is unfavorable or the outcome does not significantly affect the operation. An effective operational approach, whether direct or indirect, focuses symmetric and asymmetric effects on the objective. By a shrewd operational approach, careful integration of joint capabilities, and agile BOS combinations, Army forces bring enemies within their operational reach while protecting themselves.

5-43. **An** ***operational pause*** **is a deliberate halt taken to extend operational reach or prevent culmination**. An operational pause may occur because the force has culminated, because the character of the operation has changed (by the intervention of another enemy, for example), or through a combination of other factors. If the situation requires an operational pause, the commander should designate a new main effort. Army forces coordinate

operational pauses with other components so the joint force can maintain the initiative and momentum.

5-44. **Simultaneous and Sequential Operations**. The sequence of operations is closely related to the use of resources. ARFOR commanders synchronize subordinate unit actions in time, space, and effects to link the theater strategy and design of joint major operations to tactical execution. Without this linkage, major operations deteriorate into haphazard battles and engagements that waste resources without achieving decisive results.

5-45. When possible, Army forces conduct simultaneous operations throughout the AO. They seek to employ combat power against the entire enemy system. Army forces concurrently engage as many decisive points as possible. Simultaneity exploits depth and agility to overwhelm enemy forces. It threatens opponents with immediate consequences throughout the AO. The presence of multiple threats overloads enemy C2 systems. Enemy commanders confront many decisions within a very short period. The chance of a serious mistake is high, and each mistake creates opportunities for friendly forces.

5-46. Simultaneous operations place a premium on information superiority and overwhelming combat power. In practical terms, the force size and force projection constraints may limit the ability of Army forces to achieve simultaneity. Effective operational designs employ complementary and reinforcing joint and service capabilities to achieve maximum simultaneity.

5-47. Sequential operations achieve the end state by phases. Commanders concentrate combat power at successive points over time, achieving the mission in a controlled series of steps. Often the scale and scope of the campaign or major operation, together with the resiliency of the enemy, compel commanders to destroy and disrupt the enemy in stages, exposing the center of gravity step by step.

5-48. **Nonlinear and Linear Operations**. Nonlinear operations are now more common than ever. Stability operations and support operations are normally nonlinear. Operation Just Cause and the last 36 hours of Operation Desert Storm featured large-scale nonlinear offensive operations. Ideally, a mobile defense transforms an enemy attack into a nonlinear operation that destroys him.

5-49. In *nonlinear operations*, maneuver units may operate in noncontiguous areas throughout the AO. Even when operating in contiguous AOs, maneuver forces may orient on objectives without geographic reference to adjacent forces. Nonlinear operations typically focus on multiple decisive points. Simultaneity overwhelms opposing C2 and retains the initiative. Nonlinear operations proceed along multiple lines of operations—geographic, logical, or both. LOCs often diverge from lines of operation, and sustaining operations may depend on CSS moving with maneuver units or delivered by air.

5-50. Smaller, lighter, more mobile, and more lethal forces sustained by efficient, distribution-based CSS systems lend themselves to simultaneous operations against multiple decisive points. Situational understanding, coupled with precision fires, frees commanders to maneuver against multiple objectives. Swift maneuver against several decisive points—supported by

precise, concentrated fire—induces paralysis and shock among enemy troops and commanders.

5-51. In *linear operations*, maneuver units normally operate in contiguous AOs. Each combined arms force directs and sustains combat power toward enemy forces in concert with adjacent units. The ratio of forces to space and the array of maneuver forces emphasize geographic position and tend to create a continuous forward line of own troops (FLOT). This protects and simplifies LOCs. Protected LOCs, in turn, increase the endurance of Army forces and ensure freedom of action for extended periods.

5-52. A linear battlefield organization may be best for some operations or certain phases of an operation. Conditions that favor linear operations include those where US forces lack the information needed to conduct nonlinear operations or are severely outnumbered. Linear operations are also appropriate against a deeply arrayed, echeloned enemy force or when the threat to LOCs reduces friendly force freedom of action. In these circumstances, linear operations allow commanders to concentrate and synchronize combat power more easily. Coalition operations may also require a linear design.

5-53. Nonlinear and linear operations are not mutually exclusive. Depending upon perspective and echelon, operations often combine them. For example, a corps may employ its forces in noncontiguous areas, operating simultaneously against multiple decisive points. A brigade combat team in the same corps operating within an urban area may employ units in a linear array.

5-54. **Tempo**. ***Tempo* is the rate of military action**. Controlling or altering that rate is necessary to retain the initiative. Army forces adjust tempo to maximize friendly capabilities. Commanders consider the timing of the effects achieved rather than the chronological application of combat power or capabilities. Tempo has military significance only in relative terms. When the sustained friendly tempo exceeds the enemy's ability to react, friendly forces can maintain the initiative and have a marked advantage.

5-55. Commanders complement rapid tempo with three related concepts. First, operational design stresses simultaneous operations rather than a deliberate sequence of operations. Second, an operation may achieve rapid tempo by avoiding needless combat. This includes bypassing resistance that appears at times and places commanders do not consider decisive. Third, the design gives maximum latitude to independent action and initiative by subordinate commanders.

5-56. Army forces generally pay a price for rapid tempo through greater fatigue and resource expenditure. Commanders judge the capacity of their forces to operate at high tempo based on theater resources and deteriorating friendly performance. They design the operation for various tempos that take into account the endurance of the force.

Input from Other Commanders and Staff

5-57. Subordinate, adjacent, and higher commanders use similar factors but different perspectives to visualize their battlespace. Commanders increase the depth and sophistication of their visualizations through exchanges with other commanders. Advanced C2 systems support this collaboration by

allowing commanders to share a common operational picture (COP). In a similar fashion, staff input, in the form of estimates, provides focused analysis of the situation and its potential effects on operations. Commanders direct staffs to provide the information necessary to shape their vision.

The Commander's Experience and Judgment

5-58. Commanders consider the context of the operation, the relationship of Army forces within the joint team, and JFC-designated roles and missions. Experience, combined with situational understanding, provides the intellectual setting around which commanders visualize the operational design. Based upon the commander's direction, Army units plan, prepare, execute, and continuously assess the operation.

5-59. Judgment provides the basis for the considered application of combat power in innovative ways adapted to new situations. In circumstances where experience provides few answers, commanders combine their experience, intuition, and judgment with the recommendations of the staff and subordinates to create new strategies. In many instances, solutions to tough questions may come from the reasoned application of historical study, a hallmark of professional development. In other situations, small unit leaders or soldiers invent solutions to tactical problems. When proposed solutions appear, commanders consider them and decide on appropriate actions.

Experience and Innovation on Grenada

In October 1983, Army forces invaded Grenada as part of Joint Task Force 120. During operations on 27 October, paratroopers from the 82d Airborne Division advanced eastward across southern Grenada. Army forces cleared all enemy forces in their AO, phase line by phase line. During operations, soldiers discovered that runway problems at Point Salines had delayed the arrival of the division's attack helicopters, a critical means of fire support. Without the helicopters, the 82d soldiers relied upon naval aircraft and naval gunfire. Their tactical radios, however, were incompatible with communications systems aboard the ships of the *Independence* battle group. Army soldiers invented a solution to their dilemma by using commercial telephone cards to send their request for fire support to Fort Bragg, North Carolina. Fort Bragg personnel then relayed the requests via satellite to the ships. Army soldiers developed an innovative solution to a complex problem and, by doing so, helped to identify and later correct the joint compatibility issues.

DESCRIBE

5-60. To describe operations, commanders use operational framework and elements of operational design to relate decisive, shaping, and sustaining operations to time and space. In all operations, purpose and time determine the allocation of space. Commanders clarify their description, as circumstances require. They emphasize how the combination of decisive, shaping, and sustaining operations relates to accomplishing the purpose of the overall operation. When appropriate, commanders include deep, close, and rear areas

in the battlefield organization. Whether commanders envision linear or nonlinear operations, combining the operational framework with the elements of operational design provides a flexible tool to describe actions. Commanders describe their vision in their commander's intent and planning guidance, using terms suited to the nature of the mission and their experience.

Commander's Intent

5-61. Commanders express their vision as the commander's intent. The staff and subordinates measure the plans and orders that transform thought to action against it. **The *commander's intent* is a clear, concise statement of what the force must do and the conditions the force must meet to succeed with respect to the enemy, terrain, and the desired end state.** Commanders make their own independent, and sometimes intuitive, assessment of how they intend to win. The final expression of intent comes from commanders personally.

5-62. Intent, coupled with mission, directs subordinates toward mission accomplishment in the absence of orders. When significant opportunities appear, subordinates use the commander's intent to orient their efforts. Intent includes the conditions that forces meet to achieve the end state. Conditions apply to all courses of action. They include the tempo, duration, effect on the enemy, effect on another friendly force operation, and key terrain.

Commander's Intent and Sherman's "March to the Sea"

On 4 April 1864, LTG Ulysses S. Grant wrote to MG William T. Sherman regarding his plan for conducting a spring campaign against the Confederacy. LTG Grant conveyed his intent to "take the initiative in the spring campaign, to work all parts of the army together, and somewhat toward a common center." LTG Grant informed MG Sherman of what his fellow commanders would be doing to accomplish that intent. Then he told MG Sherman to "move against Johnston's army, to break it up and to get into the interior of the enemy's country as far as you can, inflicting all the damage you can against their war resources. I do not propose to lay down for you a plan of campaign, but simply lay down the work it is desirable to have done and leave you free to execute it in your own way. Submit to me, however, as early as you can, your plan of operations."

LTG Grant understood that by asking MG Sherman to penetrate deep into enemy territory he would occasionally lose communications with his subordinate. Yet, he trusted that MG Sherman understood what he was to do, adding, "I believe you will accomplish it." The operation that resulted from this intent was MG Sherman's "march to the sea." The operation forced the Confederacy to divert resources from the forces opposing the Union main effort by the Army of the Potomac and hastened the end of the war.

Planning Guidance

5-63. From the vision, commanders develop and issue planning guidance. Planning guidance may be either broad or detailed, as circumstances dictate. However, it conveys the essence of the commander's vision. Commanders use their experience and judgment to add depth and clarity to their planning guidance. Commanders attune the staff to the broad outline of their vision, while still permitting latitude for the staff to explore different options.

Planning Guidance—Grant and Thomas at Chattanooga

On 18 November 1863, MG Ulysses S. Grant gave MG George H. Thomas his planning guidance for seizing Confederate positions near Chattanooga, Tennessee, a critical city lying along vital Confederate LOCs. MG Grant told MG Thomas of his plan for a daylight assault to seize Missionary Ridge, thereby gaining key terrain from which to weaken the Confederate defense. He stated that "the general plan, you understand, is for Sherman to effect a crossing of the Tennessee River just below the mouth of Chickamauga…to secure the heights on the northern extremity to about the railroad tunnel before the enemy can concentrate against him. You will cooperate with Sherman. The troops in Chattanooga Valley should be well concentrated on your left flank, leaving only the necessary force to defend fortifications on the right and center, and a movable column of one division in readiness to move wherever ordered. Your effort then will be to form a junction with Sherman, making your advance well towards the northern end of Missionary Ridge, and moving as near simultaneously with him as possible." Once the two forces converged, MG Thomas was told to establish communications "at once between the two armies by roads on the south bank of the river." MG Grant intended to move fast; thus, he added that wanted the troops to be "provided with two days' cooked rations in haversacks and one hundred rounds of ammunition on the person of each infantry soldier." MG Grant's guidance was simple and clear. MG Thomas accomplished his mission, and the Union Army defeated the Confederate forces at Chattanooga.

DIRECT

5-64. Armed with a coherent and focused intent, commanders and staffs develop the concept of operations and synchronize the BOS. The BOS are the physical means (soldiers, organizations, and equipment) used to accomplish the mission. The BOS group related systems together according to battlefield use. Information about specific tasks associated with each BOS is in FM 7-15.

The Battlefield Operating Systems

- Intelligence
- Maneuver
- Fire support
- Air defense
- Mobility/countermobility/survivability
- Combat service support
- Command and control

Intelligence

5-65. The intelligence system plans, directs, collects, processes, produces, and disseminates intelligence on the threat and environment to perform intelligence preparation of the battlefield (IPB) and the other intelligence tasks. A critical part of IPB involves collaborative, cross-BOS analysis across echelons and between analytic elements of a command. The other intelligence tasks are—

- Situation development.
- Target development and support to targeting.
- Indications and warning.
- Intelligence support to battle damage assessment.
- Intelligence support to force protection.

Intelligence is developed as a part of a continuous process and is fundamental to all Army operations.

Maneuver

5-66. Maneuver systems move to gain positions of advantage against enemy forces. Infantry, armor, cavalry, and aviation forces are organized, trained, and equipped primarily for maneuver. Commanders maneuver these forces to create conditions for tactical and operational success. By maneuver, friendly forces gain the ability to destroy enemy forces or hinder enemy movement by direct and indirect application of firepower, or threat of its application.

Fire Support

5-67. Fire support consists of fires that directly support land, maritime, amphibious, and special operations forces in engaging enemy forces, combat formations, and facilities in pursuit of tactical and operational objectives. Fire support integrates and synchronizes fires and effects to delay, disrupt, or destroy enemy forces, systems, and facilities. The fire support system includes the collective and coordinated use of target acquisition data, indirect-fire weapons, fixed-wing aircraft, electronic warfare, and other lethal and nonlethal means to attack targets. At the operational level, maneuver and fires may be complementary in design, but distinct in objective and means.

Air Defense

5-68. The air defense system protects the force from air and missile attack and aerial surveillance. It prevents enemies from interdicting friendly forces while freeing commanders to synchronize maneuver and firepower. All members of the combined arms team perform air defense tasks; however, ground-based air defense artillery units execute most Army air defense operations. These units protect deployed forces and critical assets from observation and attack by enemy aircraft, missiles, and unmanned aerial vehicles. The WMD threat and proliferation of missile technology increase the importance of the air defense system. Theater missile defense is crucial at the operational level.

Mobility/Countermobility/Survivability

5-69. *Mobility* operations preserve friendly force freedom of maneuver. Mobility missions include breaching obstacles, increasing battlefield circulation,

improving or building roads, providing bridge and raft support, and identifying routes around contaminated areas. *Countermobility* denies mobility to enemy forces. It limits the maneuver of enemy forces and enhances the effectiveness of fires. Countermobility missions include obstacle building and smoke generation. *Survivability* operations protect friendly forces from the effects of enemy weapons systems and from natural occurrences. Hardening of facilities and fortification of battle positions are active survivability measures. Military deception, OPSEC, and dispersion can also increase survivability. NBC defense measures are essential survivability tasks.

Combat Service Support

5-70. CSS includes many technical specialties and functional activities. It includes the use of host nation infrastructure and contracted support. CSS provides the physical means for forces to operate, from the production base and replacement centers in the continental US to soldiers engaged in close combat. It is present across the range of military operations, at all levels of war.

Command and Control

5-71. Command and control has two components—the commander and the C2 system. Communications systems, intelligence systems, and computer networks form the backbone of C2 systems and allow commanders to lead from any point on the battlefield. The C2 system supports the commander's ability to make informed decisions, delegate authority, and synchronize the BOS. Moreover, the C2 system supports the ability of commanders to adjust plans for future operations, even while focusing on the current fight. Staffs work within the commander's intent to direct units and control resource allocations. They also are alert to spotting enemy or friendly situations that require command decisions and advise commanders concerning them. Through C2, commanders initiate and integrate all military functions and systems toward a common goal: mission accomplishment (see FM 6-0).

Command and control **is the exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission.**

5-72. Reliable communications are central to C2 systems. Effective battle command requires reliable signal support systems that enable commanders to conduct operations at varying tempos. Nonetheless, commanders, not their communication systems, dictate command style. Signal planning increases the commander's options by providing signal support to pass vital information at critical times. This capability allows commanders to leverage tactical success and anticipate future operations. Communications planning is a vital component of maintaining or extending operational reach.

PERSONAL IMPACT OF THE COMMANDER

5-73. Command occurs at the commander's location, whether at a command post, infiltrating at night with light infantry elements, or in a combat vehicle with the decisive operation. Commanders balance inspiring soldiers through leading by example with the need to maintain C2 continuity. Even when equipped with advanced C2 systems, commanders carefully consider their personal location and its impact on their ability to recognize opportunities. In larger tactical and operational formations, the command post is normally the focus of information flow and planning. There, information systems, the staff, and the COP enhance commanders' ability to visualize possibilities and recognize opportunities. Yet there are times when commanding from forward locations is necessary. Plans should account for such temporary requirements as well as the possible loss of the commander. Commanders at all levels locate where they can not only exercise command but also sense the battle. Sometimes this is at the command post; sometimes it is face to face with subordinate commanders and soldiers.

5-74. The commander's will is the constant element that propels the force through the shock and friction of battle. Things can and will go wrong. The ability of leaders and soldiers to concentrate erodes as they reach the limits of their endurance. If the enemy is skilled and resolute, soldiers may approach that point when "can't be done" and "can't go any further" dominate their thinking. At that point, the will and personal presence of commanders provide the impetus for action.

Modern land warfare is tough, uncompromising, and highly lethal. The enemy is found and engaged at ranges from a few meters to thousands of meters. Casualties are sudden and unexpected even though you know they will happen. Because of that, commanders and soldiers at every level are aware not only of the tactical, operational, and strategic problem solving demands of war but also the intense human dimension. They know results are final and will be frozen in time for a lifetime. Objectives are achieved but always at a cost to your soldiers. It is why at all levels the aim always is mission at least cost. Often that least cost is achieved by seizing the initiative and by bold action. Commanders and soldiers have to feel it all to really know what to do. But in feeling it all they must not be paralyzed into inaction. They must decide, often in nanoseconds, make the decision stick, and go on. They must feel but they also must act. They cannot give in to second guessing themselves nor to their emotions. That is what makes combat leadership so demanding. It is why commanders train hard and continually throughout a professional lifetime so they can make the few tough decisions they have to make in battle to put their soldiers at the best possible advantage over the enemy. Soldiers trust battle commanders to be able to do that, but also to assume responsibility when things do not go as planned and quickly make the right adjustments to keep them at that advantage.

General Frederick M. Franks Jr.
VII Corps Commander, Operation Desert Storm

Chapter 6

Conducting Full Spectrum Operations

I think the time has come when we should attempt the boldest moves, and my experience is that they are easier of execution than more timid ones…

Major General William Tecumseh Sherman

6-1. While differing dramatically in their particulars, full spectrum operations follow a cycle of planning, preparation, execution, and continuous assessment. These cyclic activities are sequential but not discrete; they overlap and recur as circumstances demand. As a whole, they make up the *operations process*. Battle command drives the operations process (see Figure 6-1, page 6-2). Army forces design and conduct operations to win on the offensive; dictate the terms of combat and avoid fighting the enemy on his terms; seize and retain the initiative; and build momentum quickly to win decisively.

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PLAN

6-2. The commander's intent and planning guidance direct the activities of the staff and subordinate commanders. The staff assists the commander with the coordination and detailed analysis necessary to convert the planning guidance and commander's intent into a plan. The plan becomes a common reference point for operations (see FM 5-0).

6-3. ***Planning* is the means by which the commander envisions a desired outcome, lays out effective ways of achieving it, and communicates to his subordinates his vision, intent, and decisions, focusing on the results he expects to achieve.** Plans forecast but do not predict. A plan is a continuous, evolving framework of anticipated actions that

maximizes opportunities. It guides subordinates as they progress through each phase of the operation. Any plan is a framework from which to adapt, not a script to be followed to the letter. The measure of a good plan is not whether execution transpires as planned but whether the plan facilitates effective action in the face of unforeseen events. Good plans foster initiative.

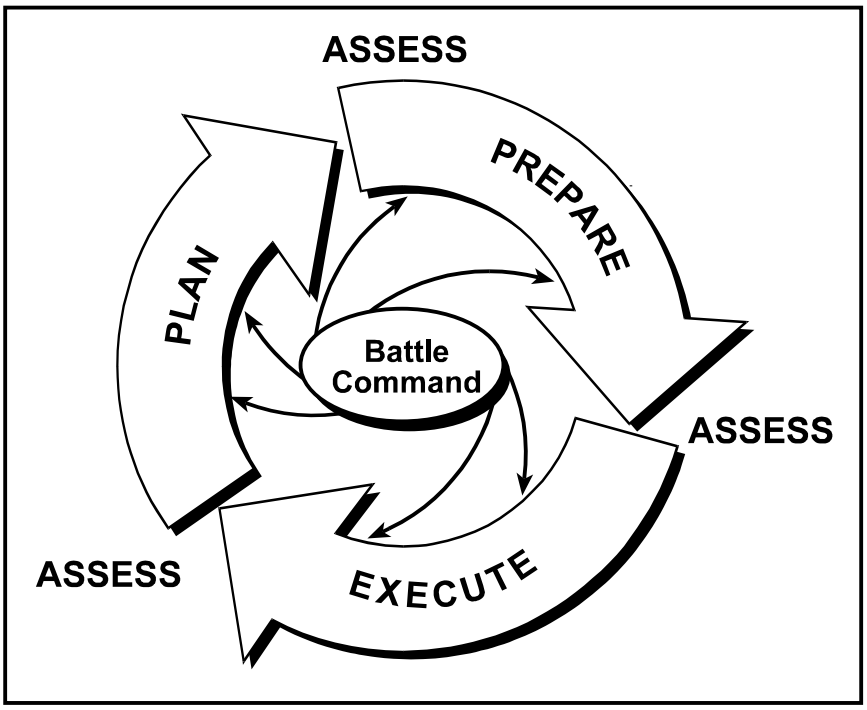

Figure 6-1. The Operations Process

6-4. Scope, complexity, and length of planning horizons differ between operational and tactical planning. Campaign planning coordinates major actions across significant periods. Planners mesh service capabilities with those of joint and multinational formations as well as interagency and nongovernmental organizations. Tactical planning has the same clarity of purpose as operational planning, but has a shorter planning horizon. Comprehensive, continuous, and adaptive planning characterizes successful operations at both the operational and tactical levels.

6-5. Plans specify what commanders will decide personally. In the offense, for example, commanders normally decide when to commit the reserve. In a tense stability operation, the commander may decide the exact positions of tactical elements. Regardless of echelon, commanders identify those information requirements they consider most important to their decisions—the commander's critical information requirements (CCIR). These are typically information requirements that help them confirm their vision of the battlefield or identify significant deviations from it. The staff incorporates CCIR into the appropriate parts of the plan and passes them to subordinate units.

6-6. Plans give subordinates the latitude and guidance to exercise disciplined initiative within the bounds of the commander's intent. For example, aviation and ground maneuver elements might attack enemy missiles capable of

delivering weapons of mass destruction (WMD) wherever located, no matter what their mission at the time. Some operations require tight control over subordinate elements. However, commanders ensure that plans remain as flexible as possible and impose the minimum control required for mission success. Commanders encourage subordinates to seize the initiative through plans and directions that provide guidance concerning opportunity.

6-7. German Field Marshal Helmuth von Moltke (victor in the Franco-Prussian war of 1870) observed that "no plan…extends with any degree of certainty beyond the first encounter with the main enemy force." This is as true today as it was more than a century ago. Moltke's dictum, rather than condemning the value of planning, reminds commanders and staffs of the relationship between planning and execution during operations. The purpose of any plan is to establish the conceptual basis for action. The plan provides a reasonably accurate forecast of execution. However, it remains a starting point, not the centerpiece of the operation. As GEN George S. Patton Jr. cautioned, "…one makes plans to fit circumstances and does not try to create circumstances to fit plans. That way danger lies."

OPERATIONAL AND TACTICAL PLANNING

6-8. Planning is dynamic and continuous (see JP 5-0). Operational-level planning focuses on developing plans for campaigns, subordinate campaigns, and major operations. Combatant commanders develop theater campaign plans to accomplish multinational, national, and theater strategic objectives. Subordinate unified commands typically develop subordinate campaign plans or operation plans that accomplish theater strategic objectives. Joint task force (JTF) commanders may develop subordinate campaign plans if the mission requires military operations of sufficient scope, size, complexity, and duration. Land component commanders normally develop plans for major operations that support the campaign plan.

6-9. In major operations, Army force commanders choose to accept or decline battle, decide what use to make of tactical successes and failures, and advise joint force commanders (JFCs) on the long-term needs and prospects of their operations. Since campaign plans generally set a series of long-term objectives, they often require phases. Therefore, a campaign plan normally provides a general concept of operations for the entire campaign and a specific operation order for the campaign's initial phase. Planning for major operations mirrors planning for the overall campaign but is reduced in scope. Even if a major operation is not the initial phase of a campaign, planning for it as a branch or a sequel may begin long before actual execution.

6-10. Operational and tactical planning complement each other but have different aims. Operational planning prepares the way for tactical activity on favorable terms; it continually seeks to foster and exploit tactical success. Major operations depend on creatively using tactical actions to accomplish strategic or operational purposes in specific contexts against adaptive opponents. Tactical planning emphasizes flexibility and options. Planning horizons for tactical actions are relatively short. Comprehensive planning may be feasible only for the first engagement or phase of a battle; succeeding actions depend on enemy responses and circumstances. The art of tactical planning lies in anticipating and developing sound branches and sequels.

6-11. Brevity is essential; so is speed. Staffs must avoid consuming too much time developing lengthy plans that contain irrelevant details. When plans arrive late, subordinate units can only react. To save time and shorten plans, commanders and staffs anticipate support requirements and forecast options. Headquarters at each level plan in parallel with higher and lower headquarters. Parallel planning expedites the exchange of information among headquarters and should be used as much as possible. Commanders exploit technology to increase situational understanding and speed of planning.

Change of Plans at Normandy

On 6 June 1944, Army forces executed Operation Overlord, an air and sea invasion of Western Europe. VII Corps planned an assault on Utah Beach by the 4th Infantry Division along with predawn airborne drops by the 82d and 101st Airborne Divisions. Like most D-Day operations, events proceeded differently than planned.

Upon execution, the airborne units were scattered across the French countryside with some units forming quickly while others grouped into small, isolated pockets. Regardless, airborne troops pressed on to their objectives or fought where they were, creating disorder among the defenders.

The 4th Infantry Division landed at Utah Beach where, of four beach control vessels guiding the force, one broke down and two others were sunk. The remaining vessel guided the landing force to the beaches, but they arrived south of their designated areas. BG Theodore Roosevelt Jr., the assistant division commander, made a personal reconnaissance and realized that the original plan must change. He returned to the landing site and ordered the two infantry battalions to advance inland instead of realigning onto the original amphibious landing sites, a decision that was executed without confusion. Changing plans fit the circumstances, and the 4th Infantry Division successfully pressed the fight inland.

6-12. There are two doctrinal planning procedures (see FM 5-0). In units with a formally organized staff, the military decision making process helps commanders and staffs develop estimates, plans, and orders. It provides a logical sequence of decision and interaction between the commander and staff. The military decision making process provides a common framework for all staffs that supports the maximum use of parallel planning. At the lowest tactical echelons, commanders do not have a staff. Consequently, commanders and leaders follow the troop leading procedures. Both procedures hinge on the commander's ability to visualize and describe the operation. Both are means to an end: their value lies in the result, not the process.

PHASING

6-13. **A *phase* is a specific part of an operation that is different from those that precede or follow. A change in phase usually involves a change of task.** Phasing assists in planning and controlling. Considerations of time, distance, terrain, resources, and important events contribute to the decision to phase an operation.

6-14. If Army forces lack the means to overwhelm an enemy in a single simultaneous operation, then commanders normally phase the operation. A phase is a period when a large portion of the force conducts similar or mutually supporting activities. Operations link successive phases. Individual phases gain significance only in the larger context of the campaign or major operation. Each phase should strive for simultaneity in time, space, and purpose. In this way, commanders combine simultaneous operations within phases while sequencing operations to achieve the end state.

6-15. Links between phases and the requirement to transition between phases are critically important. Commanders establish clear conditions for how and when these transitions occur. Although phases are distinguishable to friendly forces, the operational design conceals these distinctions from opponents through concurrent, complementary joint and Army actions.

BRANCHES AND SEQUELS

6-16. Operations never proceed exactly as planned. An effective design places a premium on flexibility. Commanders incorporate branches and sequels into the operational design to gain flexibility. Visualizing and planning branches and sequels are important because they involve transition—changes in mission, in type of operation, and often in forces required for execution. Unless planned and executed efficiently, transitions can reduce the tempo of the operation, slow its momentum, and cede the initiative to the adversary.

6-17. **A *branch* is a contingency plan or course of action (an option built into the basic plan or course of action) for changing the mission, disposition, orientation, or direction of movement of the force to aid success of the current operation, based on anticipated events, opportunities, or disruptions caused by enemy actions. Army forces prepare branches to exploit success and opportunities, or to counter disruptions caused by enemy actions.** Commanders anticipate and devise counters to enemy actions. Although anticipating every possible threat action is impossible, branches anticipate the most likely ones. Commanders execute branches to rapidly respond to changing conditions.

6-18. ***Sequels* are operations that follow the current operation. They are future operations that anticipate the possible outcomes—success, failure, or stalemate—of the current operation.** A counteroffensive, for example, is a logical sequel to a defense; exploitation and pursuit follow successful attacks. Executing a sequel normally begins another phase of an operation, if not a new operation. Commanders consider sequels early and revisit them throughout an operation. Without such planning, current operations leave forces poorly positioned for future opportunities, and leaders are unprepared to retain the initiative. Both branches and sequels should have execution criteria, carefully reviewed before their implementation and updated based on assessment of current operations.

CONCEPT OF OPERATIONS

6-19. **The *concept of operations* describes how commanders see the actions of subordinate units fitting together to accomplish the mission. As a minimum, the description includes the scheme of**

maneuver and concept of fires. The concept of operations expands the commander's selected course of action and expresses how each element of the force will cooperate to accomplish the mission. Where the commander's intent focuses on the end state, the concept of operations focuses on the method by which the operation uses and synchronizes the battlefield operating systems (BOS) to translate vision and end state into action. Commanders ensure that the concept of operations is consistent with both their intent and that of the next two higher commanders.

RISK MANAGEMENT

6-20. ***Risk management*** **is the process of identifying, assessing, and controlling risk arising from operational factors, and making an informed decision that balances risk cost with mission benefits.** It provides leaders with a systematic mechanism to identify risk associated with a course of action during planning (see FM 3-100.14; FM 5-0). Commanders integrate risk management into all aspects of the operations process. During planning, commanders identify, assess, and weigh risks. They convey risk considerations as guidance. Risk guidance affects course of action development. It also affects application of some elements of operational design, such as end state, designation of objectives, and lines of operation. Risk management also influences task organization; control measures; and the concepts of operations, fires, and CSS. During execution, assessment of risk assists commanders in making informed decisions regarding changes to task organization, shifting priorities of effort and support, and shaping future operations. Effective risk management results in mission accomplishment at least cost.

ORDERS

6-21. Orders translate plans into execution. When possible, commanders issue them personally, face-to-face. If this is not possible, a video teleconference or other communication means can substitute. Commanders allow their subordinates maximum freedom of action, providing mission-type orders whenever practical. Mission-type orders specify what to do and the purpose for doing it, without prescribing how to do it (see FM 6-0). Control measures should aid cooperation among forces without imposing needless restrictions on their freedom of action.

PREPARE

6-22. ***Preparation*** **consists of activities by the unit before execution to improve its ability to conduct the operation including, but not limited to, the following: plan refinement, rehearsals, reconnaissance, coordination, inspections, and movement.** It requires staff, unit, and soldier actions. The complexity of operations imposes significant challenges. The nature of land operations differs tremendously from situation to situation. Mission success depends as much on preparation as planning. Rehearsals help staffs, units, and individuals to prepare for full spectrum operations. Preparation includes a range of activities. These include mission rehearsals, brief-backs, equipment and communications checks, standing operating procedure (SOP) reviews, load plan verification, soldier readiness preparation, and weapons test-firing.

STAFF PREPARATION

6-23. Each staff section and element conducts activities to maximize the operational effectiveness of the force. Coordination between echelons and preparation that precedes execution are just as important, if not more important, than developing the plan. Staff preparation includes assembling and continuously updating estimates. For example, continuous intelligence preparation of the battlefield (IPB) provides accurate situational updates for commanders when needed. Whether incorporated into a formal process or not, the preparatory activities of staff sections and force elements inform planning and continue throughout preparation and execution. Updated estimates form the basis for staff recommendations; the value of current, reasonably accurate estimates increases exponentially with tempo.

UNIT PREPARATION

6-24. Warfighting skills developed and honed in training form the base of mission success. Without the Army's ability to fight and win, commitment of its units to a theater would entail unacceptable risks. Combat-ready units can adapt readily to noncombat situations; units not trained to standard cannot survive in combat situations. The knowledge, discipline, cohesion, and technical skill necessary to defeat an enemy are also fundamental for success in environments that seem far removed from the battlefield. The combat capability of Army forces is the basis for all it does. In a stability operation, the threat of force may deter escalation. In a support operation, it may preempt violence and lawlessness.

6-25. The tempo may not allow commanders to withdraw entire formations for extensive reorganization and training. However, Army unit modularity lets commanders designate some elements for training while the rest of the force continues the mission. This concurrent training may take place in theater-designated training areas, where units receive intensified maintenance support while conducting individual and collective training. The creation of training areas is both necessary and a challenge for Army commanders.

INDIVIDUAL PREPARATION

6-26. Before the force deploys, soldiers prepare for overseas action. Army units frequently receive augmentation and replacements during preparation for deployment. Commanders pay special attention to the reception and preparation of these soldiers and to integrating their families into support groups. In addition to preparing replacements for deployment, commanders ensure that gaining units rapidly assimilate them as team members.

RULES OF ENGAGEMENT

6-27. Operational requirements, policy, and law define rules of engagement (ROE). ROE always recognize the right of self-defense, the commander's right and obligation to protect assigned personnel, and the national right to defend US forces, allies, and coalition participants against armed attack. The Joint Chiefs of Staff standing ROE provide baseline guidance (see CJCSI 3121.01A). The standing ROE may be tailored and supplemented for specific operations to meet commanders' needs. Effective ROE are enforceable, understandable, tactically sound, and legally sufficient. Further,

effective ROE are responsive to the mission and permit subordinate commanders to exercise initiative when confronted by opportunity or unforeseen circumstances.

6-28. In all operations, whether using lethal or nonlethal force, ROE may impose political, practical, operational, and legal limitations upon commanders. Commanders factor these constraints into planning and preparation as early as possible. Withholding employment of particular classes of weapons and exempting the territory of certain nations from attack are examples of such limitations. Tactically, ROE may extend to criteria for initiating engagements with certain weapons systems (for example, unobserved fires) or reacting to an attack. ROE never justify illegal actions. In all situations, soldiers and commanders use the degree of force that is militarily necessary, proportional to the threat, and prudent for future operations.

6-29. ROE do not assign specific tasks or require specific tactical solutions; they allow commanders to quickly and clearly convey to subordinates a desired posture regarding the use of force. In passing orders to subordinates, commanders act within the ROE received. However, ROE never relieve commanders from the responsibility to formulate an operational design. The end state, objectives, and mission must be clear. Commanders at all levels continually review the ROE to ensure their effectiveness in light of current and projected conditions. Such considerations may include ROE for computer network attack. Soldiers who thoroughly understand ROE are better prepared to apply the proper balance of initiative and restraint.

Home Station, Predeployment, and Deployment Training

In 1995, the 1st Armored Division changed its mission essential task list (METL) to prepare for peace enforcement operations in Bosnia. The nature of ongoing diplomatic negotiations created difficult circumstances for commanders trying to determine when they would deploy. Regardless, the on-again, off-again nature of diplomatic negotiations allowed the 1st Armored Division to transition from a wartime to a peacekeeping METL. The division made maximum use of the available time, undergoing a two-month intensive training and certification process at home station and the Combat Maneuver Training Center, Hohenfels, Germany. Commanders and staff participated in command post exercises designed to match Balkan political-military realities, while leaders and soldiers engaged in situational training exercises and cold weather training. Upon deployment, observers from the Center for Army Lessons Learned accompanied the division and observed ongoing operations. Center for Army Lessons Learned members sent reports to Combat Maneuver Training Center trainers, who updated existing training scenarios to match changing operational conditions in the theater. The division also continued training after deployment to keep a warfighting edge during the peace enforcement operation. 1st Armored Division maneuver battalion soldiers rotated from Bosnia to Taborfalva Training Area in Hungary once during their tour. There they underwent gunnery qualification. The soldiers then returned to Bosnia and resumed their mission.

EXECUTE

6-30. Execution is concerted action to seize and retain the initiative, build and maintain momentum, and exploit success. The tenet of initiative is fundamental to success in any operation, yet simply seizing the initiative is not enough. A sudden barrage of precision munitions may surprise and disorganize the enemy, but if not followed by swift and relentless action, the advantage diminishes and disappears. Successful operations maintain the momentum generated by initiative and exploit successes within the commander's intent.

SEIZE AND RETAIN THE INITIATIVE

6-31. Initiative gives all operations the spirit, if not the form, of the offense. Operationally, seizing the initiative requires leaders to anticipate events so their forces can see and exploit opportunities faster than the enemy. Once they seize the initiative, Army forces exploit opportunities it creates. Initiative requires constant effort to force an enemy to conform to friendly purposes and tempo while retaining friendly freedom of action. From the leader's perspective, commanders place a premium on audacity and making reasoned decisions under uncertain conditions. The commander's intent and aggressiveness of subordinates create conditions for exercising disciplined initiative.

6-32. Enemies who gain and maintain the initiative compel Army forces to react to their strengths and asymmetric capabilities. Ways enemies may try to do this include attempting to neutralize US technological and organizational superiority, adapting the tempo to their capabilities, and outlasting Army forces. Therefore, Army forces seize the initiative as soon as possible and dictate the terms of action throughout the operation. Army forces compel the adversary to accept action on terms established by friendly forces. Provoked to react to US actions, the adversary cedes the initiative and opens himself to exploitation when he errs or fails to react quickly enough.

Take Action

6-33. Commanders create conditions for seizing the initiative by acting. Without action, seizing the initiative is impossible. Faced with an uncertain situation, there is a natural tendency to hesitate and gather more information to reduce the uncertainty. However, waiting and gathering information might reduce uncertainty, but will not eliminate it. Waiting may even increase uncertainty by providing the enemy with time to seize the initiative. It is far better to manage uncertainty by acting and developing the situation. When the immediate situation is unclear, commanders clarify it by action, not sitting and gathering information.

6-34. Commanders identify times and places where they can mass the effects of combat power to relative advantage. To compel a reaction, they threaten something the enemy cares about—his center of gravity or decisive points leading to it. By forcing the enemy to react, commanders initiate an action-to-reaction sequence that ultimately reduces enemy options to zero. Each action develops the situation further and reduces the number of possibilities to be considered, thereby reducing friendly uncertainty. Each time the enemy must react, his uncertainty increases. Developing the situation by forcing the enemy to react is the essence of seizing and retaining the initiative.

6-35. Action is not solely offensive. Force projection may initiate enemy reactions. Movement of forces, together with military deception, often triggers an enemy response. Commanders may deter or induce a desired enemy action by beginning defensive preparations. Aggressive reconnaissance, in particular, allows commanders at every level to gain and maintain contact with enemy forces. Reconnaissance develops the situation, protects friendly forces from surprise, and retains the initiative. Action includes force protection activities that preclude or reduce specific enemy threats.

Create and Exploit Opportunities

6-36. Events that offer better ways to success are opportunities. The key to recognizing them is continuous monitoring of the battlespace in light of the objectives and the commander's intent. Failure to understand the opportunities inherent in an enemy's action surrenders the initiative. CCIR must include elements that support seizing and retaining the initiative so soldiers can recognize opportunities as they develop.

6-37. Commanders encourage subordinates to act within their intent as opportunities occur. Vision, clear communication of intent, and the command climate create an atmosphere conducive to the exercise of subordinate initiative. Digitized information processes, the common operational picture (COP), and situational understanding enhance commanders' ability to recognize possibilities, visualize opportunities, and share them with others.

Assess and Take Risk

6-38. Uncertainty and risk are inherent in all military operations. Recognizing and acting on opportunity means taking risks. Reasonably estimating and intentionally accepting risk is not gambling. Carefully determining the risks, analyzing and minimizing as many hazards as possible, and executing a supervised plan that accounts for those hazards contributes to successfully applying military force. Gambling, in contrast, is imprudently staking the success of an entire action on a single, improbable event. Commanders assess risk in ascending orders of magnitude by answering three questions:

- Am I minimizing the risk of losses?
- Am I risking the success of the operation?
- Am I risking the destruction of the force itself?

6-39. When commanders embrace opportunity, they accept risk. Audacity is a catalyst that can reverse a situation through its influence on enemy perception. It is counterproductive to wait for perfect preparation and synchronization. The time taken to issue complete orders across successive nets could mean an opportunity lost. It is far better to quickly summarize the essentials, get things moving, and send the details later. Leaders optimize the use of time with warning orders, fragmentary orders, and routine COP updates. Too great a desire for orderliness leads to overdetailed orders, overcontrol, and failure to seize and retain the initiative.

BUILD AND MAINTAIN MOMENTUM

6-40. Army forces fight thinking, adaptive enemies. Presented with consistent patterns of activity, enemies devise countermeasures. The benefits of

seizing the initiative do not last long, given enemy determination to overthrow the friendly design. Momentum retains and complements initiative.

6-41. Momentum derives from seizing the initiative and executing shaping, sustaining, and decisive operations at a high tempo. Momentum allows commanders to create opportunities to engage the enemy from unexpected directions with unanticipated capabilities. Having seized the initiative, commanders continue to control the relative momentum by maintaining focus and pressure, and controlling the tempo. They ensure that they maintain momentum by anticipating transitions and moving rapidly between types of operations. When the opportunity presents itself to exploit, commanders push all available forces to the limit to build on momentum gained.

Maintain Focus

6-42. In the stress of combat, a commander's instinct may be to focus on the dangers enemy activity poses. That concern is valid, but it must not cloud the commander's primary focus: achieving his own purpose and objectives. Commanders assess enemy activity in terms of the end state and concentrate on what their forces can do to attain it. Further, commanders assess the situation to determine how they can best attack enemy decisive points and protect friendly ones. Commanders evaluate the current situation, seeking opportunities to turn enemy activity to their immediate advantage.

> *...I am heartily tired of hearing about what Lee is going to do. Some of you always seem to think he is suddenly going to turn a double somersault and land in our rear and on both flanks at the same time. Go back to your command and try to think what we are going to do ourselves, instead of what Lee is going to do.*
>
> Lieutenant General U.S. Grant
> Battle of the Wilderness, 1864

Pressure the Enemy

6-43. Pressure derives from the uninterrupted pace, level, and intensity of activity applied to an enemy. Once Army forces gain contact, they maintain it. Constant pressure and prompt transition to an exploitation deny the enemy time to regain balance and react. Operational pauses, even if intentional and designed to improve a combat service support (CSS) posture or restore order, may carry real dangers—to include potential loss of the hard-won benefits of the offensive. Army forces press relentlessly without hesitation and are ruthlessly opportunistic.

6-44. Adept commanders anticipate the need to maintain appropriate forces suitably positioned for exploitation and continuity of action. As maneuver forces slow and approach culmination, commanders consider the best way to maintain tempo and continue to press the enemy. Commanders can replace the leading units with fresh forces, reinforce the lead units, or apply precision fires against targets in depth. As long as the force in contact can maintain pressure and is not approaching a culminating point, reinforcement is generally preferable to battle handover. Operational fires may also create new opportunities for pressing the enemy by complementing maneuver.

Control the Tempo

6-45. Speed promotes surprise and can compensate for lack of forces. It magnifies the impact of success in seizing the initiative. By executing at a rapid tempo, Army forces present enemies with new problems before they can solve current ones. Rapid tempo should not degenerate into haste. Ill-informed and hasty action usually precludes effective combinations of combat power; it may lead to unnecessary casualties. The condition of the enemy force dictates the degree of synchronization necessary. When confronted by a coherent and disciplined enemy, commanders may slow the tempo to deliver synchronized blows. As the enemy force loses cohesion, commanders increase the tempo, seeking to accelerate the enemy's moral and physical collapse.

EXPLOIT SUCCESS

6-46. Ultimately, only successes that achieve the end state count. To determine how to exploit tactical and operational successes, commanders assess them in terms of the higher commander's intent. An operational design links objectives along lines of operations. However, success will likely occur in ways unanticipated in the plan. Commanders may gain an objective in an unexpected way. Success signals a rapid assessment to answer these questions:

- Does the success generate opportunities that more easily accomplish the objectives?
- Does it suggest other lines of operations?
- Does it cause commanders to change their overall intent?
- Should the force transition to a sequel?
- Should the force accelerate the phasing of the operation?

6-47. Operationally, success may signal a transition to the next phase of the campaign or major operation. Ideally, an appropriate sequel is ready. However, even a prepared sequel requires rapid refinement to reflect the realities of the actual success. Commanders see beyond the requirements of the moment. They employ every available asset to extend their operations in time and space to make the success permanent. Commanders understand that they must maintain momentum and initiative to win rapidly and decisively.

6-48. Exploitation demands assessment and understanding of the impact of sustaining operations. CSS provides the means to exploit success and convert it into decisive results. Sustainment preserves the freedom of action necessary to take advantage of opportunity. Commanders remain fully aware of the status of units and anticipate CSS requirements, recognizing that CSS often determines the depth to which Army forces exploit success.

6-49. Rapid tempo and repeated success always disorganize units to some extent. To exploit success and maintain momentum, reorganization occurs concurrently with other operations rather than as a separate phase. Prolonged reorganization can jeopardize momentum and require committing reserves. Enhanced situational understanding gives commanders an accurate description of unit status and expedites reorganization. Successful reorganization depends on CSS. Force commanders provide timely reorganization guidance and priorities to the CSS commanders. Doing this allows CSS commanders to anticipate requirements and position resources.

COMBINE DECISIVE, SHAPING, AND SUSTAINING OPERATIONS

6-50. During execution, commanders combine and direct decisive, shaping, and sustaining operations. Ideally, the decisive operation occurs approximately as planned. However, opportunity and circumstances often alter the sequence and details of the decisive operation. Commanders create or preserve opportunities through shaping operations. Shaping operations precede and occur concurrently with the decisive operation. Sustaining operations ensure freedom of action to maintain momentum and exploit success.

6-51. Ideally, decisive, shaping, and sustaining operations occur at the same time. Simultaneous operations allow commanders to seize and retain the initiative. However, they require overwhelming combat power and information superiority. Commanders determine if they can accomplish the mission with a single, simultaneous operation; if they cannot, they phase it. In making this decision, they consider the skill and size of the opponent, the size of the area of operations (AO), operational reach, available joint support, and the scope of the mission. The crucial consideration is the success of the decisive operation, which must have enough combat power to conclusively determine the outcome. If that combat power is not available, commanders phase the operation to achieve the maximum possible simultaneous action within each phase.

Maneuver and Fires

6-52. Through maneuver, Army forces seek to defeat the enemy decisively. Maneuver directly engages the enemy center of gravity if feasible; if not, it concentrates against decisive points. Maneuver implies more than the use of fire and movement to secure an objective; it aims at the complete overthrow of the enemy's operational design. It requires audacious concepts and ruthless execution.

6-53. Maneuver avoids those enemy forces best prepared to fight; it engages them at a time or place or in a manner that maximizes relative friendly force advantages. Maneuver creates and exposes enemy vulnerabilities to the massed effects of friendly combat power.

6-54. Operations may include periods of extremely fluid, nonlinear operations, alternating with linear operations (see Figure 6-2, page 6-14). A commander may start an operation with a compact arrangement of forces and quickly transition into nonlinear maneuver against an array of objectives throughout the AO. In different circumstances, the commander might direct multiple attacks in depth to disorganize the enemy and seize key terrain; the attacking force would then consolidate, defend, and prepare to resume the offensive. Another example: A joint land force seizes a lodgment using airborne, air assault, and amphibious operations, while special operations forces attack important facilities distributed across a portion of the AO. The airborne and amphibious units then establish a defense around the lodgment to defend against enemy reaction. When additional forces arrive, the land forces conduct nonlinear operations to end the conflict.

6-55. In some cases, multinational considerations may limit the commander's ability to conduct operations throughout the AO. Multinational partners may lack the information systems, precision attack capabilities, and maneuverability of US forces. Commanders adapt their concept of operations

accordingly, blending multinational and US capabilities. The multinational participants might conduct linear operations, while US Army forces conducted simultaneous nonlinear maneuver in depth. Such an operational design would employ each force according to its capabilities and complement linear operations with nonlinear operations.

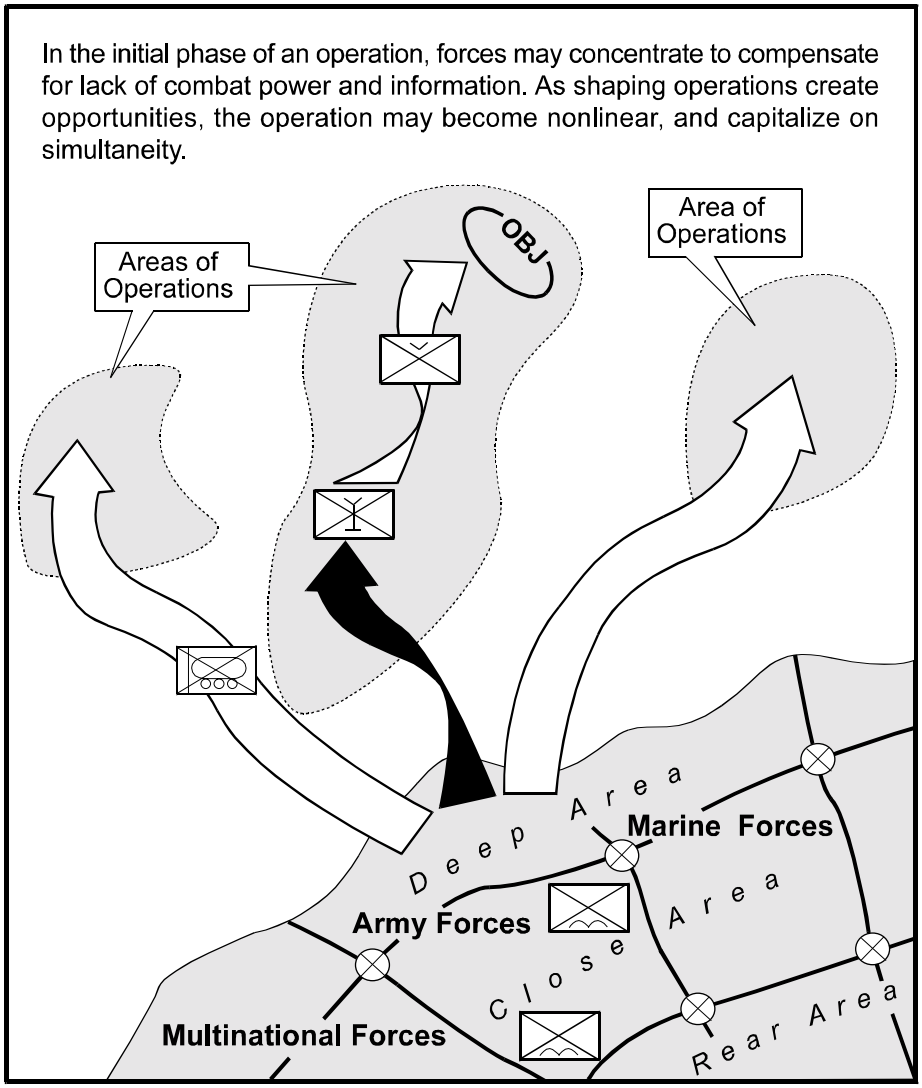
In the initial phase of an operation, forces may concentrate to compensate for lack of combat power and information. As shaping operations create opportunities, the operation may become nonlinear, and capitalize on simultaneity.
OBJ
Areas of Operations
Area of Operations
Deep Area
Marine Forces
Army Forces
Close Area
Multinational Forces
Rear Area

Figure 6-2. Linear and Nonlinear Combinations

6-56. More than ever, precision fires can shape the situation and create conditions for operational and tactical maneuver. Modern weapons are accurate enough for attacks to become very selective. Advanced systems—land, sea, and air—create effects that only complete saturation with fires could achieve in the past. Modern military forces are still assimilating the full consequences of this technological revolution. However, today's weapons allow commanders to avoid lengthy and costly periods of shaping operations to "set the conditions" with fires and other means. Avoiding a lengthy prelude to decisive operations preempts the enemy's chance to seize the initiative.

Commanders determine the appropriate combination of shaping operations needed to ensure success of the decisive operation, recognizing that the effects of fire are transitory.

6-57. The integration of operational fires with operational maneuver requires careful design and effective coordination with the joint force headquarters. Intelligence, surveillance, and reconnaissance (ISR) identify specific enemy capabilities whose loss significantly degrades enemy coherence. Army forces attack the targets with organic lethal and nonlethal means or pass the mission to a supporting joint element. Ideally, the attacks are simultaneous. Simultaneity shocks enemy command and control (C2) systems and often induces paralysis. When the means are insufficient for simultaneous action, commanders plan sequential attacks.

Create Overmatch

6-58. Decisive operations synchronize the BOS to create overmatch at decisive points in the AO. Overmatch is a quantitative or qualitative disparity of such magnitude that the stronger force overwhelms the weaker. Overmatch may apply to one or all of the elements of combat power in combination. Rapid tempo, offensive information operations (IO), and lethal fires combine to disrupt enemy C2 and create a condition of information superiority. Fire support, force protection capabilities, and maneuver neutralize enemy fire support. Supported by indirect and joint fires, maneuver forces close with the enemy and complete his destruction with close combat.

Sustain Combat Power

6-59. Commanders develop a keen understanding of the effects of sustainment on operations. They balance audacity and prudence in terms of CSS and the other BOS. To a significant degree, sustainment determines operational reach and approach. Sustaining operations establish the staying power of Army forces and the depth of operations. They enable commanders to mass the effects of combat power repeatedly and maintain freedom of action.

Use Adaptive Combinations

6-60. As they visualize their battlefield framework and operational design, commanders consider incorporating combinations of contiguous and noncontiguous AOs with linear and nonlinear operations. They choose the combination that fits the situation and the purpose of the operation. Association of contiguous and noncontiguous AOs with linear and nonlinear operations creates the four combinations in Figure 6-3, page 6-16).

6-61. **Linear Operations in Contiguous AOs**. Linear operations in contiguous AOs (upper left in Figure 6-3) typify sustained offensive and defensive operations against powerful, echeloned, and symmetrically organized forces. The contiguous areas and continuous forward line of own troops (FLOT) focus combat power and protect sustaining operations. Commanders normally shape in the deep area, conduct the decisive operation in the close area, and sustain in the rear area.

6-62. **Linear Operations in Noncontiguous AOs**. The upper right box depicts a headquarters with subordinate units conducting linear operations in

noncontiguous AOs. In this case, the higher headquarters retains responsibility for the portion of its AO outside the subordinate unit AOs. The higher headquarters operational design uses nonlinear operations. The subordinate units are conducting linear operations. The subordinate units' battlefield organizations have close, deep, and rear areas; the higher headquarters battlefield organization does not. This combination might be appropriate when the higher headquarters is conducting widely separated simultaneous operations, for example, a vertical envelopment against a decisive point (the decisive operation) from a lodgment (shaping and sustaining operations).

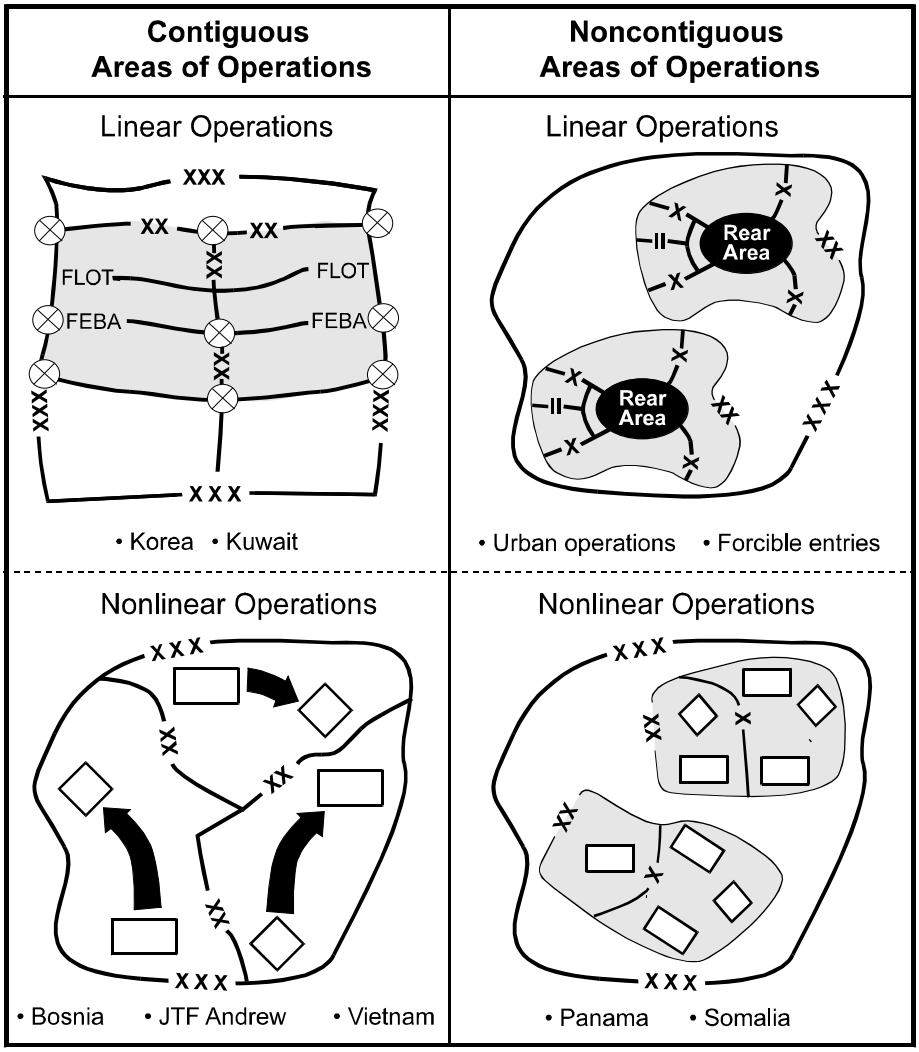

Figure 6-3. Combinations of Contiguous and Noncontiguous Areas of Operations with Linear and Nonlinear Operations

6-63. **Nonlinear Operations in Contiguous AOs**. The lower left box illustrates nonlinear operations being conducted in contiguous AOs. This combination typifies stability operations, such as those in Haiti, Bosnia, and Kosovo. Hurricane Andrew support operations also followed this design. The higher headquarters assigns the responsibility for its entire AO to

subordinate units. Within the subordinate AOs, operations are nonlinear, with the subordinate headquarters receiving support and resources from the higher headquarters. On a tactical scale, search and attack operations are often nonlinear operations conducted in contiguous AOs.

6-64. **Nonlinear Operations in Noncontiguous AOs**. The lower right box depicts units conducting nonlinear operations in noncontiguous AOs. The operations of both higher and subordinate units are nonlinear. The size of the land AO, composition and distribution of enemy forces, and capabilities of friendly forces are important considerations in deciding whether to use this battlefield organization and operational design. In Somalia in 1992, for example, Army forces conducted nonlinear stability operations and support operations in widely separated AOs around Kismayu and Mogadishu.

COMPLEX OPERATIONAL CONSIDERATIONS

6-65. Army forces execute full spectrum operations in environments that contain complex operational considerations. All operations include challenges. However these complex operational considerations require special attention by commanders and staffs:

- Nuclear, biological, and chemical (NBC) environments.
- Local populace and displaced persons.
- Unconventional threats.
- Urban operations.

Nuclear, Biological, and Chemical Environments

6-66. The threat of WMD profoundly changes theater conditions and imposes major force protection requirements. A major JFC objective is to deter WMD deployment, and if deterrence fails, to find and destroy enemy WMD before they are used. The potential for destruction or contamination of infrastructure by NBC weapons increases the requirement for Army forces that can operate effectively in and around contaminated environments. To a significant degree, the readiness of Army forces to operate in NBC environments deters enemies from using WMD and encourages them to seek solutions that avoid the risk of strategic retaliation.

6-67. Operations in NBC environments demand careful preparation (see JP 3-11; FM 3-11). Vaccines protect soldiers against some biological weapons, but inoculations may need weeks to fully protect recipients. Therefore, protection against these weapons becomes part of the continuous process of keeping units ready. In similar fashion, soldiers may receive medical countermeasures, such as pretreatment before the operation or antidotes during the operation. Medical surveillance programs provide tactical commanders with a tool to develop a baseline of disease threats in the AO. This baseline aids in detecting when the enemy begins biological warfare.

6-68. Units require equipment specifically designed for operations in an NBC environment. Specially trained units may be required to mitigate its effects. NBC operations are CSS-intensive; therefore, sustaining operations require careful planning.

6-69. Commanders at all echelons recognize that the WMD threat is also psychological. Every soldier fears these weapons and has doubts concerning countermeasure and antidote effectiveness. In many cases, the actual threat is less than soldiers imagine, but only realistic individual training will minimize their fear. Training gives soldiers confidence in their equipment and their ability to use it.

6-70. The psychological impact of NBC use goes beyond individual soldiers. Commanders and staffs must be prepared to conduct operations in an NBC environment. Failure to exercise command and staff procedures in scenarios featuring realistic use of NBC weapons can lead to a mentality that NBC hazards present insurmountable obstacles. Only tough command post exercises that force commanders and staffs to work through the problems NBC hazards pose can overcome this attitude. Realistic training demonstrates that NBC hazards, like any other condition, are simply obstacles to overcome.

6-71. Successful US operations may increase the likelihood of enemy WMD use. If the enemy believes that only WMD will retrieve victory, he may resort to using them. Army forces adjust operations accordingly. Rapid maneuver places Army forces near the enemy, compelling him to risk employing WMD on his own forces. Army forces disperse as much as possible and concentrate swiftly, and only as necessary to mass effects. Nonlinear operations position Army forces deep within the enemy AO, complicating his targeting decisions. Precision attacks destroy enemy C2 and CSS systems. Commanders emphasize active and passive force protection. They disperse assembly areas and CSS units. ISR focuses on locating and identifying WMD-capable enemy forces. Reconnaissance units detect and mark hazardous and contaminated areas. Planning also considers US retaliatory or preemptive strikes. Other active measures include theater missile defense, counterair operations, precision fires against enemy WMD systems, and offensive IO.

Local Populace and Displaced Persons

6-72. Army forces create opportunities for success by enlisting the support of the local populace and displaced persons. Frequently, Army forces operate in AOs characterized by chaos and disorder. They may encounter populations with diverse cultures and political orientations that may support, oppose, or remain ambivalent to US presence. In any operation, Army forces will likely encounter displaced civilians or persons of unknown status. Commanders identify these people and design operations with their protection in mind.

6-73. Commanders depend on accurate knowledge of group locations and beliefs to ensure actions taken are consistent with achieving JFC goals and objectives. IO, especially psychological operations, and its related activities (public affairs, and civil-military operations) help commanders influence perceptions and attitudes of the local population. In some operations, IO and its related activities may constitute the decisive operation. The importance of influencing civilians varies, depending on the mission and force objectives.

6-74. The cornerstone of successful action with local populace and displaced persons is discipline. When Army forces operate with the local populace, discipline cements the relationship. In circumstances where the populace is ambivalent or unfriendly, discipline prevents tension from flaring into open

hostility and fosters respect. ROE guide the use of lethal force, not to inhibit action and initiative but to channel it within acceptable limits. The disciplined application of force is more than a moral issue; it is a critical contributor to operational success.

Unconventional Threats

6-75. Commanders protect the force from unconventional threats in four ways. First, they train units and soldiers to protect themselves against terrorist tactics and intrusion. They complement self-defense capabilities by enforcing security policies, such as movement procedures, appropriate to the situation. Second, commanders consider the threat posed by unconventional elements and act to fill gaps in protective capabilities. Actions may include requesting additional combat forces. Third, commanders use all available information resources (including host nation, theater, national, and organic assets) to understand unconventional threats to the force. Commanders at major headquarters may form a national intelligence support team with a total focus on unconventional threats. Finally, by example and constant attention, commanders dispel any sense of complacency toward unconventional threats.

Urban Operations

6-76. ***Urban operations*** **include offense, defense, stability, and support operations conducted in a topographical complex and adjacent natural terrain where manmade construction and high population density are the dominant features.** The world is largely urban in terms of population concentration. Army forces conduct urban operations in large, densely populated areas that present distinct problems in clearing enemy forces, restoring services, and managing major concentrations of people. The topography and proximity of noncombatants degrade the effectiveness of technically advanced sensors and weapons. Thus, cities are likely battlegrounds where weaker enemies attempt to negate the advantages Army forces have in more open terrain.

6-77. From a planning perspective, commanders view cities not just as a topographic feature but as dynamic entities that include hostile forces, local population, and infrastructure. Planning for urban operations requires careful IPB, with particular emphasis on the three-dimensional nature of the topography and the intricate social structure of the population. CSS planning accounts for increased consumption, increased threats to lines of communications, and anticipated support to noncombatants. Commanders develop ROE carefully, adapting them to a variety of circumstances, and ensuring soldiers thoroughly understand them.

6-78. Urban operations compress the spatial scale of tactical operations and require combined arms integration at small unit level. Units require careful preparation and thorough rehearsal to master using combined arms techniques in very close quarters. Urban operations place a premium on closely coordinated, combined arms teams and carefully protected CSS. Urban operations are CSS-intensive, demanding large quantities of materiel and support for military forces and noncombatants displaced by operations.

FOLLOW-ON OPERATIONS

6-79. All operations evolve in terms of nature, purpose, and type. Successful operations create new conditions that lead to significant changes in the situation. A new or fundamentally altered center of gravity may emerge. Typically, new conditions initiate sequels.

Transition

6-80. Transitions mark the intervals between the ongoing operation and full execution of branches and sequels. Transitions often mark the change from one dominant type of operations, such as offense, to another such as stability. At lower echelons, transitions occur when one formation passes through another, for example, or when units must breach an obstacle belt. Commanders consider transitions from the current operation to future operations early in the planning process. Command arrangements, for example, often change. Typically, the command structure evolves to meet changing situations. A JTF, for example, may dissolve, and forces revert to their parent components. The operational requirements for Army forces may pass to a new commander, who continues postconflict missions even as some Army forces prepare to redeploy. Frequently, US forces transition from a US-led coalition to a multinational United Nations structure supported by US troops. This occurred at the end of Operation Restore Democracy in Haiti, as US combat forces withdrew.

6-81. Changes in the strategic situation require adjusting the strength and composition of deployed forces. When the dominant type of operation changes—from offense to stability, for example—the types of units originally deployed may no longer be appropriate. As each new force prepares for operations, the JFC and the commander of the Army service component command tailor the Army force to meet mission requirements and theater constraints. The force that initiated the operation may only superficially resemble the force in theater when the operation concludes.

6-82. Transitions are the sequels that occur between types of operations. Commanders anticipate and plan for them as part of any future operation. Transitions between operations are difficult and during execution may create unexpected opportunities for Army forces, enemies, or adversaries. Such opportunities must be recognized quickly, developed as branches to the transition operation, and acted upon immediately. Transition between operations may be the most difficult follow-on operation to accomplish.

Reconstitution

6-83. Prolonged combat or intensive engagements diminish unit combat effectiveness. When a unit is no longer combat effective, commanders consider reconstituting it (see FM 4-100.9). *Reconstitution* consists of those actions that commanders plan and implement to restore units to a desired level of combat effectiveness commensurate with mission requirements and available resources. Reconstitution operations include regeneration and reorganization. *Regeneration* consists of rebuilding a unit through large-scale replacement of personnel, equipment, and supplies. This includes the reestablishment or replacement of essential C2 and training for the newly rebuilt unit.

Reorganization is that action taken to shift internal resources within a degraded unit to increase its level of combat effectiveness.

6-84. The headquarters two echelons up normally controls reconstitution. Commanders and staffs plan reconstitution to fit mission priorities and support the higher commander's intent. The reconstitution plan takes into account follow-on missions. The final decision on whether to reconstitute a depleted unit depends on the situation. Commanders remain flexible. Mission requirements and available resources (including time) determine appropriate reconstitution actions.

6-85. Reconstitution planning is part of course of action development. Units with roles in reconstitution train to perform it. Commanders, staffs, and executing units plan and prepare for reconstitution before they confront it. Any combat, combat support, or CSS unit may require reconstitution. In particular, operations in an NBC environment increase the likelihood that some units will require reconstitution after decontamination.

6-86. Reconstitution requires aggressive application of the tenets of Army operations. Reconstitution actions must regenerate units that allow commanders to continue to set the terms of battle. These actions are necessary to maintain the agility of the force. Quickly recognizing the need for and executing reconstitution help provide the combat effective forces needed to retain the initiative. Commanders visualize reconstitution in terms of depth of time, space, and resources just as they do other operations. They look ahead, consider the resources required and available, and direct the extensive synchronization required.

Conflict Termination

6-87. Conflict termination describes the point at which the principal means of conflict shifts from the use or threat of force to other means of persuasion. Conflict termination may take several forms: for example, the adversary may surrender, withdraw, or negotiate an end to the conflict. Commanders and staffs consider conflict termination requirements when developing campaign plans. If the end state is a situation that promotes economic growth, for example, commanders consider the effects of destroying the economic infrastructure. Regardless of how the conflict ends, it often changes into less violent, but persistent, forms of confrontation.

6-88. Conflict termination is more than the achievement of a military end state: it is the military contribution to broader success criteria. As the policy governing the conflict evolves, so does the end state at both joint and Army levels. Effective campaign plans account for more than military objectives; they specify end states that support national policy. They are also careful to distinguish between the military and other instruments of national power.

6-89. A period of postconflict activities exists between the end of a conflict and redeployment of the last US soldier. Army forces are vital in this period. As a sequel to decisive major operations, Army forces conduct stability operations and support operations to sustain the results achieved by the campaign. These operations ensure that the threat does not resurrect itself and that the conditions that generated the conflict do not recur. Postconflict stability

operations and support operations—conducted by Army forces—transform temporary battlefield successes into lasting strategic results.

ASSESS

6-90. Commanders, assisted by the staff, continuously assess the situation and the progress of the operation, and compare it with the initial vision. ***Assessment* is the continuous monitoring—throughout planning, preparation, and execution—of the current situation and progress of an operation, and the evaluation of it against criteria of success to make decisions and adjustments**. Commanders direct adjustments to ensure that operations remain aligned with the commander's intent. Subordinates assess their unit's progress by comparing it with the senior commander's intent and adjusting their actions to achieve the envisioned end state, particularly in the absence of orders.

6-91. Assessment precedes and guides every activity within the operations process and concludes each operation or phase of an operation. Assessment entails two distinct tasks: continuously monitoring the situation and the progress of the operation, and evaluating the operation against measures of effectiveness. Together, the two tasks compare reality to expectations.

6-92. Not all operations proceed smoothly toward the desired end state. Commanders examine instances of unexpected success or failure, unanticipated enemy actions, or operations that simply do not go as planned. They assess the causes of success, friction, and failure, and their overall impact on the force and the operation. In assessing the cause of failure or substandard performance, commanders address immediate causes while retaining the intellectual flexibility to look for related or hidden contributors. For example, a commander may replace an ineffective leader after an engagement in which Army forces suffer severe losses. In another instance, the commander may retain subordinate commanders within a defeated force. In both instances, the commander seeks answers to larger questions concerning operations security, enemy doctrine, leadership, equipment, and the state of training of friendly and enemy forces. Commanders also learn from their mistakes and allow subordinates to learn from theirs.

6-93. The American way of war has historically included rapid adaptation to unexpected challenges and situations. A tactical or operational success may prove the worth of a significant technological or procedural innovation. Conversely, Army forces may discover a dangerous vulnerability during the operation. Leaders continuously identify, assess, and disseminate lessons learned throughout the force.

6-94. Formal, postoperational assessments combine the after-action reports prepared by the units involved with the observations compiled by observers. These assessments become the basis for changes to doctrine, training, leader development, organization, and materiel that support soldiers. They typically include interviews with commanders and staffs as well as with small unit leaders and soldiers. Just as commanders encourage and accept initiative on the part of subordinates during the operation, commanders encourage and accept complete candor during the postoperational assessment.

PART THREE

Conducting Decisive Full Spectrum Operations

Part Three discusses the four types of operations—offensive, defensive, stability, and support—that Army forces conduct. It illustrates how to apply the concepts described in Part Two within the operational environment described in Part One.

Chapter 7 discusses offensive operations. The offense is the decisive form of war. The will to seize, retain, and exploit the initiative defines the spirit and purpose of the offense. It is essential to success in all operations—defensive, stability, and support—as well as offensive. Combined with a demonstrated combat capability, it makes Army forces credible in any situation. Circumstances may require defending; however, victory requires shifting to the offense as soon as possible. The offense ends when the force accomplishes the mission, reaches a limit of advance, or approaches culmination. It then consolidates, resumes the attack, or prepares for another operation.

Chapter 8 discusses defensive operations. Commanders direct defensive operations to defeat enemy attacks, buy time, economize forces, or develop conditions favorable for the offense. Although the defense is the stronger form of war, it normally cannot achieve a decision. Thus, commanders simultaneously or sequentially combine defensive operations with offensive operations.

Chapter 9 discusses stability operations. Stability operations include a range of actions that Army forces conduct outside the US and US territories. Their purpose is to promote and sustain regional and global stability. Stability operations are diverse, continuous, and often long-term. However, the credibility and staying power of Army forces allow them to maintain stability until the situation is resolved. Army forces may execute stability operations as part of a theater engagement plan, smaller-scale contingency, or follow-on operation to a campaign or major operation. They are inherently complex and place great demands on leaders, units, and soldiers. Stability operations require the mental and physical agility to shift among situations of peace, conflict, and war and between combat and noncombat operations.

Chapter 10 discusses support operations. Army forces conduct support operations to relieve suffering and help civil authorities prepare for or respond to crises. Support operations are divided into two categories: Domestic support operations are conducted within the US and US territories. Foreign humanitarian assistance is conducted outside the US and US territories. Domestic support operations include civil support—operations to help civil authorities protect US territory, population, and infrastructure against attacks. Other government agencies have primary responsibility for these areas; however, Army forces have specialized capabilities and provide important support. Support operations usually aim to overcome manmade or natural disaster conditions for a limited time until civil authorities no longer need help.

In all environments, the initiative of Army leaders, agility of Army units, depth of Army resources, and versatility of Army soldiers combine to allow Army forces to conduct decisive full spectrum operations. Commanders synchronize offensive, defensive, stability, and support operations to defeat any enemy or dominate any situation—anywhere, anytime.

Chapter 7

Offensive Operations

In war the only sure defense is offense, and the efficiency of the offense depends on the war-like souls of those conducting it.

General George S. Patton Jr.
War as I Knew It

7-1. The offense is the decisive form of war. Offensive operations aim to destroy or defeat an enemy. Their purpose is to impose US will on the enemy and achieve decisive victory. While immediate considerations often require defending, decisive results require shifting to the offense as soon as possible.

PURPOSES OF OFFENSIVE OPERATIONS

7-2. Offensive operations seek to seize, retain, and exploit the initiative to defeat the enemy decisively. Army forces attack simultaneously throughout the area of operations (AO) to throw enemies off balance, overwhelm their capabilities, disrupt their defenses, and ensure their defeat or destruction. The offense ends when the force achieves the purpose of the operation, reaches a limit of advance, or approaches culmination. Army forces conclude a phase of an offensive by consolidating gains, resuming the attack, or preparing for future operations. Additional tasks offensive operations accomplish include—

- Disrupting enemy coherence.
- Securing or seizing terrain.
- Denying the enemy resources.
- Fixing the enemy.
- Gaining information.

OFFENSIVE OPERATIONS AT THE OPERATIONAL AND TACTICAL LEVELS OF WAR

7-3. Army operational commanders conduct offensive campaigns and major operations to achieve theater-level effects based on tactical actions. They concentrate on designing offensive land operations. They determine what objectives will achieve decisive results; where forces will operate; the relationships among subordinate forces in time, space, and purpose; and where to apply the decisive effort. Operational commanders assign AOs to, and establish command and support relationships among, tactical commanders. Tactical

commanders direct offensive operations to achieve objectives—destroying enemy forces or seizing terrain—that produce the theater-level effects operational commanders require.

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OPERATIONAL OFFENSE

7-4. At the operational level, offensive operations directly or indirectly attack the enemy center of gravity. Commanders do this by attacking enemy decisive points, either simultaneously or sequentially. Massed effects of joint and multinational forces allow attackers to seize the initiative. They deny the enemy freedom of action, disrupt his sources of strength, and create the conditions for operational and tactical success.

7-5. To attain unity of effort, operational commanders clearly identify objectives and reinforce the relationships among subordinate forces. By minimizing interoperability challenges and harnessing system capabilities, commanders tailor their forces to achieve decisive effects. They allocate sufficient joint and multinational forces to achieve their objectives.

TACTICAL OFFENSE

7-6. Tactical commanders exploit the effects that joint and multinational forces contribute to the offense. They synchronize these forces in time, space, resources, purpose, and action to mass the effects of combat power at decisive points. Commanders direct battles as part of major operations. Battles are related in purpose to the operational commander's objectives.

7-7. Battles may be linear or nonlinear and conducted in contiguous or noncontiguous AOs. Tactical commanders receive their AO, mission, objectives,

boundaries, control measures, and intent from their higher commander. They determine the decisive, shaping, and sustaining operations within their AO. They direct fires and maneuver to attack and destroy the enemy and attain terrain objectives. Tactical commanders normally have clearly defined tasks—defeat the enemy and occupy the objective.

CHARACTERISTICS OF OFFENSIVE OPERATIONS

7-8. Surprise, concentration, tempo, and audacity characterize the offense. Effective offensive operations capitalize on accurate intelligence and other relevant information regarding enemy forces, weather, and terrain. Commanders maneuver their forces to advantageous positions before contact. Force protection, including defensive information operations (IO), keeps or inhibits the enemy from acquiring accurate information about friendly forces. The enemy only sees what the friendly commander wants him to see. Contact with enemy forces before the decisive operation is deliberate, designed to shape the optimum situation for the decisive operation. The decisive operation is a sudden, shattering action that capitalizes on subordinate initiative and a common operational picture (COP) to expand throughout the AO. Commanders execute violently without hesitation to break the enemy's will or destroy him.

SURPRISE

7-9. In the offense, commanders achieve surprise by attacking the enemy at a time or place he does not expect or in a manner for which he is unprepared. Estimating the enemy commander's intent and denying him the ability to gain thorough and timely situational understanding is necessary to achieve surprise. Unpredictability and boldness help gain surprise. The direction, timing, and force of the attack also help achieve surprise. Surprise delays enemy reactions, overloads and confuses his command and control (C2) systems, induces psychological shock in enemy soldiers and leaders, and reduces the coherence of the defense. By diminishing enemy combat power, surprise enables attackers to exploit enemy paralysis and hesitancy.

7-10. Operational and tactical surprise complement each other. Operational surprise creates the conditions for successful tactical operations. Tactical surprise can cause the enemy to hesitate or misjudge a situation. But tactical surprise is fleeting. Commanders must exploit it before the enemy realizes what is happening.

7-11. Outright surprise is difficult to achieve. Modern surveillance and warning systems, the availability of commercial imagery products, and global commercial news networks make surprise more difficult. Nonetheless, commanders achieve surprise by operating in a way the enemy does not expect. They deceive the enemy as to the nature, timing, objective, and force of an attack. They can use bad weather, seemingly impassable terrain, feints, demonstrations, and false communications to lead the enemy into inaccurate perceptions. Sudden, violent, and unanticipated attacks have a paralyzing effect. Airborne, air assault, and special operations forces (SOF) attacks—combined with strikes by Army and joint fires against objectives the enemy regards as secure—create disconcerting psychological effects on the enemy.

7-12. Surprise can come from an unexpected change in tempo. Tempo may be slow at first, creating the conditions for a later acceleration that catches the enemy off guard and throws him off balance. US forces demonstrated such a rapid change in tempo before Operation Just Cause in 1989. Accelerated tempo resulted in operational and tactical surprise despite increased publicity and heightened tensions beforehand.

7-13. Commanders conceal the concentration of their forces. Units mask activity that might reveal the direction or timing of an attack. Commanders direct action to deceive the enemy and deny his ability to collect information.

Surprise—Coup de Main in Panama

The activity of US forces throughout Panama during 1989 before Operation Just Cause provides an example of achieving strategic surprise. After assuming power in 1984, Manuel Noriega threatened Panamanian democracy and American legal guarantees under the Panama Canal treaties. In response, US forces developed military contingency plans known as Prayer Book and Blue Spoon. In May 1989, Noriega's Dignity Battalions and the Panama Defense Forces increased political pressure on the US to leave Panama by harassing American service members at gunpoint. President George Bush responded by deploying Army and Marine forces during Operation Nimrod Dancer as a show of force. Over the next six months, Army forces conducted Purple Storm and Sand Fleas exercises to reinforce American maneuver rights and gain moral ascendancy over Noriega's forces. Despite the increased US activity, Noriega discounted the possibility of an invasion. On 20 December 1989, SOF conducted the initial assault upon Panama Defense Forces garrisons, airports, media centers, and transportation facilities. Conventional forces soon followed, attacking decisive points throughout Panama. Noriega and his forces were completely surprised. He fled, losing control over his forces as US forces tracked him down.

CONCENTRATION

7-14. Concentration is the massing of overwhelming effects of combat power to achieve a single purpose. Commanders balance the necessity for concentrating forces to mass effects with the need to disperse them to avoid creating lucrative targets. Advances in ground and air mobility, target acquisition, and long-range precision fires enable attackers to rapidly concentrate effects. C2 systems provide reliable relevant information that assists commanders in determining when to concentrate forces to mass effects.

7-15. Attacking commanders manipulate their own and the enemy's force concentration by combining dispersion, concentration, military deception, and attacks. By dispersing, attackers stretch enemy defenses and deny lucrative targets to enemy fires. By massing forces rapidly along converging axes, attackers overwhelm enemy forces at decisive points with concentrated combat power. After a successful attack, commanders keep their forces concentrated to take advantage of their momentum. Should enemy forces threaten them,

they may disperse again. Commanders adopt the posture that best suits the situation, protects the force, and sustains the attack's momentum.

7-16. Concentration requires coordination with other services and multinational partners. At every stage of an attack, commanders integrate joint intelligence assets with joint fires. They capitalize on air superiority to deny the enemy the ability to detect or strike friendly forces from the air. Commanders direct ground, air, and sea resources to delay, disrupt, or destroy enemy reconnaissance elements or capabilities. They also direct security, IO, and counterfire to protect friendly forces as they concentrate.

TEMPO

7-17. Controlling or altering tempo is necessary to retain the initiative. At the operational level, a faster tempo allows attackers to disrupt enemy defensive plans by achieving results quicker than the enemy can respond. At the tactical level, a faster tempo allows attackers to quickly penetrate barriers and defenses and destroy enemy forces in depth before they can react.

7-18. Commanders adjust tempo as tactical situations, combat service support (CSS) necessity, or operational opportunities allow to ensure synchronization and proper coordination, but not at the expense of losing opportunities to defeat the enemy. Rapid tempo demands quick decisions. It denies the enemy the chance to rest and continually creates opportunities.

7-19. By increasing tempo, commanders maintain momentum. They identify the best avenues for attack, plan the action in depth, provide for quick transitions to other operations, and concentrate and combine forces effectively. Commanders and staffs ensure that CSS operations prevent culmination. Once combat begins, attackers execute violently. They follow reconnaissance units or successful probes and quickly move through gaps before defenders recover. Attackers shift combat power quickly to widen penetrations, roll up exposed flanks, and reinforce successes. Friendly forces attack in depth with fires and maneuver to shatter the enemy's coherence and overwhelm his C2. While maintaining a tempo faster than the enemy's, attackers balance the tempo with the ability to exercise C2. Commanders never permit the enemy to recover from the shock of the initial assault. They prevent defenders from massing effects against the friendly decisive operation.

AUDACITY

7-20. Audacity is a simple plan of action, boldly executed. Commanders display audacity by developing bold, inventive plans that produce decisive results. Commanders demonstrate audacity by violently applying combat power. They understand when and where to take risks and do not hesitate as they execute their plan. Commanders dispel uncertainty through action; they compensate for lack of information by seizing the initiative and pressing the fight. Audacity inspires soldiers to overcome adversity and danger.

OFFENSIVE OPERATIONS WITHIN THE OPERATIONAL FRAMEWORK

7-21. Commanders conduct offensive operations within the operational framework (AO, battlespace, and battlefield organization). They synchronize

their forces in time, space, resources, purpose, and action to conduct simultaneous and sequential decisive, shaping, and sustaining operations in depth (see Figure 7-1). In certain situations, commanders designate deep, close, and rear areas.

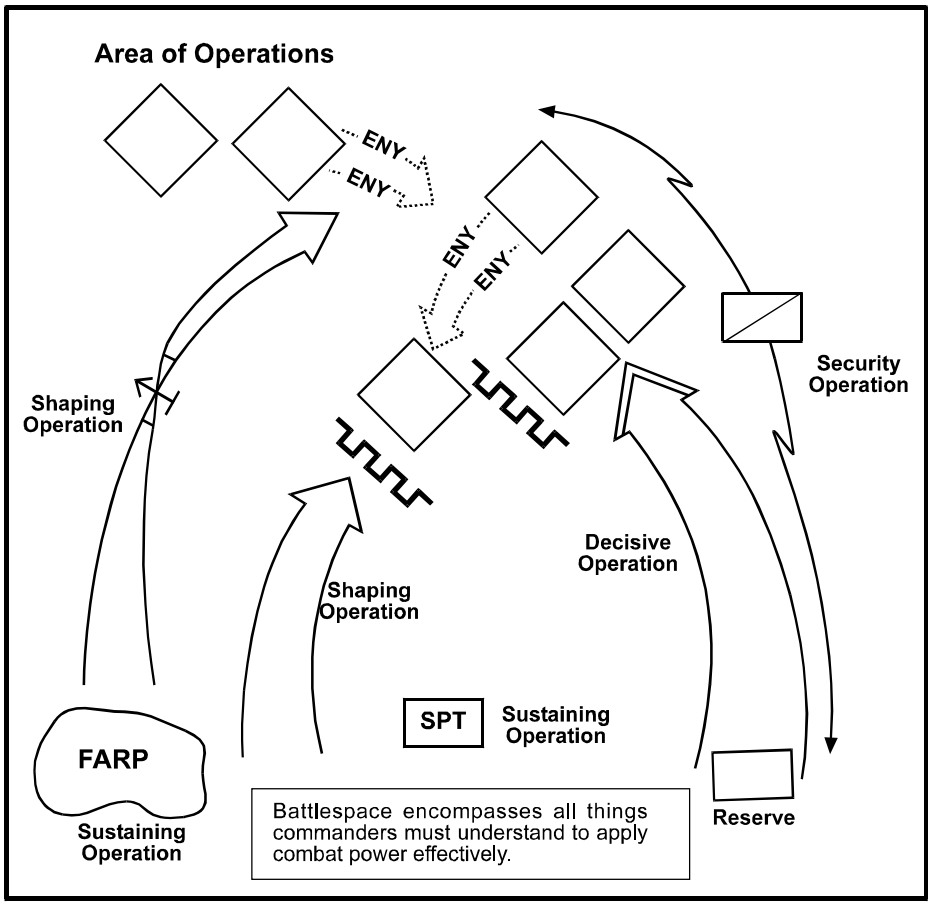


Figure 7-1. Operational Framework in the Offense

DECISIVE OPERATIONS IN THE OFFENSE

7-22. Decisive offensive operations are attacks that conclusively determine the outcome of major operations, battles, and engagements. At the operational level, decisive operations achieve the goals of each phase of a campaign. Ground operations within campaigns may include several phases. Within each phase is a decisive operation. Its results substantially affect the course of the campaign. At the tactical level, decisive battles or engagements achieve the purpose of the higher headquarters mission. Commanders win decisive operations through close combat that physically destroys the enemy; overcomes his will to resist; or seizes, occupies, and retains terrain.

7-23. Commanders weight the decisive operation with additional resources and by skillful maneuver. For example, commanders may fix part of the enemy force with a frontal attack (a shaping operation), while the majority of the force envelops it to seize a decisive point. Commanders decide when,

where, and if to commit additional supporting fires and reserves. Commanders shift priority of fires as necessary. Maneuvering forces positions them to mass fires against the enemy.

7-24. Commanders designate a reserve to provide additional combat power at the decisive time and place. The more uncertain the situation is, the larger the reserve. Once the reserve is committed, the commander designates another. The initial strength and location of reserves vary with—

- Potential missions, branches, and sequels.
- Form of maneuver.
- Possible enemy actions.
- Degree of uncertainty.

Audacity—Turning Movement at Inchon

On 25 June 1950, North Korean forces invaded South Korea. By August, the North Korean People's Army (NKPA) occupied most of the peninsula, with US and Republic of Korea forces confined to a shrinking perimeter behind the Naktong and Nam Rivers. For over a month, both sides engaged in a series of bloody attacks and counterattacks. On 15 September, while United Nations (UN) and North Korean forces were decisively engaged far to the south, X Corps conducted a two-division amphibious landing at Inchon, on the west coast of Korea north of Seoul. This operational turning movement, code-named Operation Chromite, caught the NKPA completely by surprise. Simultaneously, UN aircraft bombarded North Korean forces along the Naktong River to support an Eighth Army counteroffensive. During the following days, American and South Korean Marines pressed toward Seoul. The remainder of X Corps captured the Seoul-Suwon area and severed NKPA supply lines. Army forces soon averaged 10 miles per day over rugged terrain, with the North Korean retreat soon turning into a general rout. By October 1950, the NKPA had dissolved into disorganized remnants fleeing into borderlands adjacent to Manchuria and the Soviet Union.

Reserves provide a hedge against uncertainty. Commanders assign them only those tasks necessary to prepare for their potential mission. Only the commander who designates the reserve can commit it, unless he specifically delegates that authority.

SHAPING OPERATIONS IN THE OFFENSE

7-25. Shaping operations create conditions for the success of the decisive operation. They include attacks in depth to secure advantages for the decisive operation and to protect the force. Commanders conduct shaping operations by engaging enemy forces simultaneously throughout the AO. These attacks deny the enemy freedom of action and disrupt or destroy the coherence and tempo of his operations. Attacking enemy formations in depth destroys, delays, disrupts, or diverts enemy combat power. They may expose or create vulnerabilities for exploitation. Shaping operations in the offense include—

- Shaping attacks designed to achieve one or more of the following:

  - Deceive the enemy.
  - Destroy or fix enemy forces that could interfere with the decisive operation.
  - Control terrain whose occupation by the enemy would hinder the decisive operation.
  - Force the enemy to commit reserves prematurely or into an indecisive area.
- Reconnaissance and security operations.
- Passages of lines.
- Breaching operations.
- Unit movements that directly facilitate shaping and decisive operations.
- Operations by reserve forces before their commitment.
- Interdiction by ground and air movement and fires, singularly or in combination.
- Offensive IO.

Other shaping operations include activities in depth, such as counterfire and defensive IO. These shaping operations focus on effects that create the conditions for successful decisive operations.

Desert Storm—A Decisive Offensive Operation

On 24 February 1991, after a 38-day major shaping operation by the US Central Command air component with land component support, Army forces began one of the most decisive land combat operations of modern warfare. Army forces attacked Iraqi forces as part of a coalition offensive, XVIII Airborne Corps in the west with VII Corps on its right flank. First (Tiger) Brigade, 2d Armored Division, attacked as part of the 1st Marine Expeditionary Force in the east. Army forces quickly penetrated Iraqi defenses, rapidly seizing their objectives. Soldiers used advanced technology that allowed vehicle and air crews to acquire and engage targets from beyond the range of Iraqi weapons systems. The shock effect of armor and well-trained infantry—coupled with overwhelming fire support and responsive combat support and CSS—shattered the Iraqi army. XVIII Airborne Corps drove 100 miles north and 70 miles east into Iraq; VII Corps moved 100 miles north and 55 miles east. Coalition forces destroyed 3,800 of 4,200 tanks, over half the personnel carriers, and nearly all of the 3,000 artillery pieces belonging to the Iraqi Army. Coalition forces captured over 60,000 prisoners. After 100 hours of combat, only 7 of 43 Iraqi divisions remained combat effective. The coalition had crushed the fourth largest army in the world and liberated Kuwait.

7-26. The advance, flank, or rear security forces conduct security operations (see FM 3-90). These elements—

- Provide early warning.
- Find gaps in defenses.
- Provide time to react and space to maneuver.

- Develop the situation.
- Orient on the force or facility to be secured.
- Perform continuous reconnaissance.
- Maintain enemy contact.

In extended and noncontiguous AOs, commanders secure or conduct surveillance of the gaps between subordinate units. Commanders secure gaps by assigning a force to secure the area, dedicating surveillance efforts to monitor it, designating a force to respond to an approaching enemy, or by installing and overwatching obstacles.

SUSTAINING OPERATIONS IN THE OFFENSE

7-27. Sustaining operations in the offense ensure freedom of action and maintain momentum. They occur throughout the AO. CSS unit locations need not be contiguous with those of their supported forces. An extended major operation may place tactical units far from the original support area. Commanders may separate attacking forces from the CSS base, thus extending their lines of communication (LOCs). Commanders provide security to CSS units when operating with extended LOCs.

CONSIDERATIONS FOR NONLINEAR OFFENSIVE OPERATIONS

7-28. Nonlinear offensive operations can occur in both contiguous and noncontiguous AOs. The size of an AO is normally very large compared to the number of soldiers deployed. The AO may also encompass diverse terrain. Enemy forces will be widely dispersed and may be numerically superior. Attacking forces must focus offensive actions against decisive points, while allocating the minimum essential combat power to shaping operations. Reserves must have a high degree of tactical mobility. Forces conducting nonlinear operations require robust communications and sustainment capabilities. Commanders may dedicate forces for LOC security operations beyond that provided by available military police.

7-29. The higher headquarters conducts security operations in those portions of the AO not allocated to subordinates. Flank security importance increases as operations extend and attacking forces expose their flanks. Linkup operations often occur in this environment. Linkup operations, particularly those involving vertical envelopments, require extensive planning and rehearsal. The potential for fratricide increases due to the fluid nature of the nonlinear battlefield and the changing disposition of attacking and defending forces. The presence of noncombatants in the AO further complicates operations. In this setting, commanders exercise prudent judgment in clearing fires, both direct and indirect.

FORMS OF MANEUVER

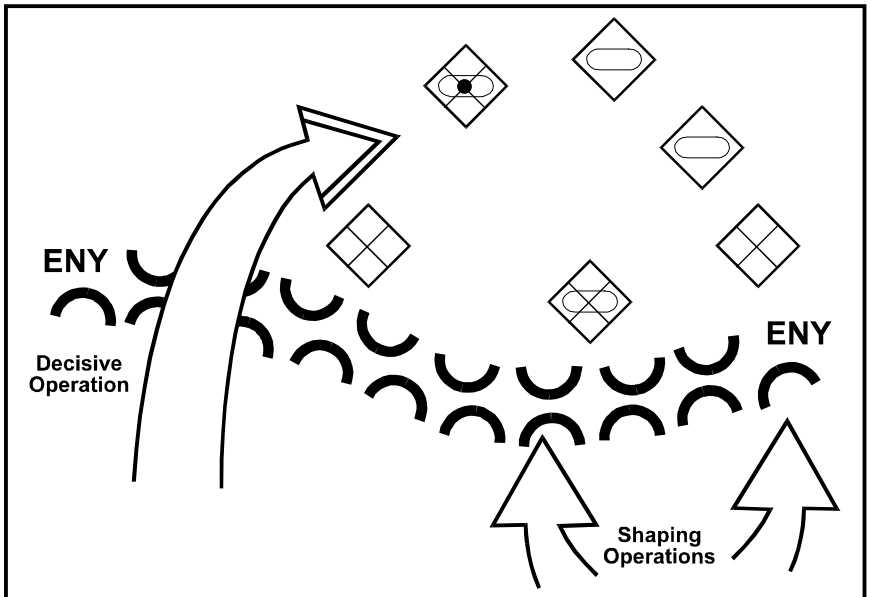
7-30. The five forms of maneuver are the envelopment, turning movement, infiltration, penetration, and frontal attack. While normally combined, each form of maneuver attacks the enemy differently. Each poses different challenges for attackers and different dangers for defenders. Commanders determine the form of maneuver to use by analyzing the factors of METT-TC.

ENVELOPMENT

7-31. **The *envelopment* is a form of maneuver in which an attacking force seeks to avoid the principal enemy defenses by seizing objectives to the enemy rear to destroy the enemy in his current positions. At the tactical level, envelopments focus on seizing terrain, destroying specific enemy forces, and interdicting enemy withdrawal routes** (see Figure 7-2). Envelopments avoid the enemy front, where he is protected and can easily concentrate fires. Single envelopments maneuver against one enemy flank; double envelopments maneuver against both. Either variant can develop into an encirclement.

7-32. To envelop the enemy, commanders find or create an assailable flank. Sometimes the enemy exposes a flank by advancing, unaware of friendly locations. In other conditions, such as a fluid battle involving forces in noncontiguous AOs, a combination of air and indirect fires may create an assailable flank by isolating the enemy on unfavorable terrain.

7-33. Attackers may also create an assailable flank by arriving from an unexpected direction. A vertical envelopment (an air assault or airborne operation) is an example of such a shaping operation. Attackers may also fix defenders' attention forward through a combination of fires and shaping or diversionary attacks. Attackers maneuver against the enemy's flanks and rear and concentrate combat power on his vulnerabilities before he can reorient his defense.



An envelopment avoids enemy strength by maneuver around or over enemy defenses. The decisive operation is directed against the enemy flanks or rear.

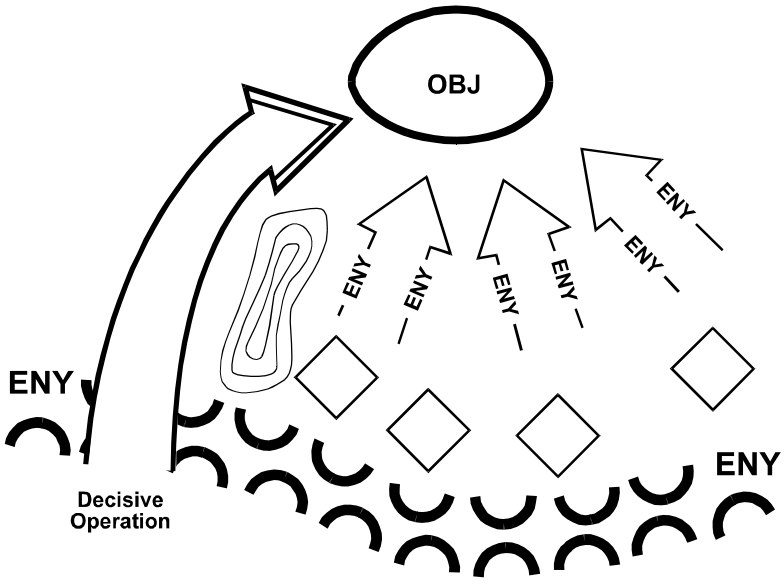
Figure 7-2. Envelopment

7-34. An envelopment may result in an encirclement. ***Encirclements* are operations where one force loses its freedom of maneuver because an opposing force is able to isolate it by controlling all ground lines of**

communications. An offensive encirclement is typically an extension of either a pursuit or envelopment. A direct pressure force maintains contact with the enemy, preventing his disengagement and reconstitution. Meanwhile, an encircling force maneuvers to envelop the enemy, cutting his escape routes and setting inner and outer rings. The outer ring defeats enemy attempts to break through to his encircled force. The inner ring contains the encircled force. If necessary, the encircling force organizes a hasty defense along the enemy escape route, while synchronizing joint or multinational fires to complete his destruction. All available means, including obstacles, should be used to contain the enemy. Then friendly forces use all available fires to destroy him. Encirclements often occur in nonlinear offensive operations.

TURNING MOVEMENT

7-35. **A *turning movement* is a form of maneuver in which the attacking force seeks to avoid the enemy's principal defensive positions by seizing objectives to the enemy rear and causing the enemy to move out of his current positions or divert major forces to meet the threat** (see Figure 7-3). A major threat to his rear forces the enemy to attack or withdraw rearward, thus "turning" him out of his defensive positions. Turning movements typically require greater depth than other forms of maneuver. Deep fires take on added importance. They protect the enveloping force and attack the enemy. Operation Chromite, the amphibious assault at Inchon during the Korean War, was a classic turning movement that achieved both strategic and operational effects.



A turning movement attacks the enemy rear to "turn" him out of his position and force him to fight to the rear of his flanks.

Figure 7-3. Turning Movement

INFILTRATION

7-36. **An *infiltration* is a form of maneuver in which an attacking force conducts undetected movement through or into an area occupied by enemy forces to occupy a position of advantage in the enemy rear while exposing only small elements to enemy defensive fires** (see Figure 7-4). The need to avoid being detected and engaged may limit the size and strength of infiltrating forces. Infiltration rarely defeats a defense by itself. Commanders direct infiltrations to attack lightly defended positions or stronger positions from the flank and rear, to secure key terrain to support the decisive operation, or to disrupt enemy sustaining operations. Typically, forces infiltrate in small groups and reassemble to continue their mission.

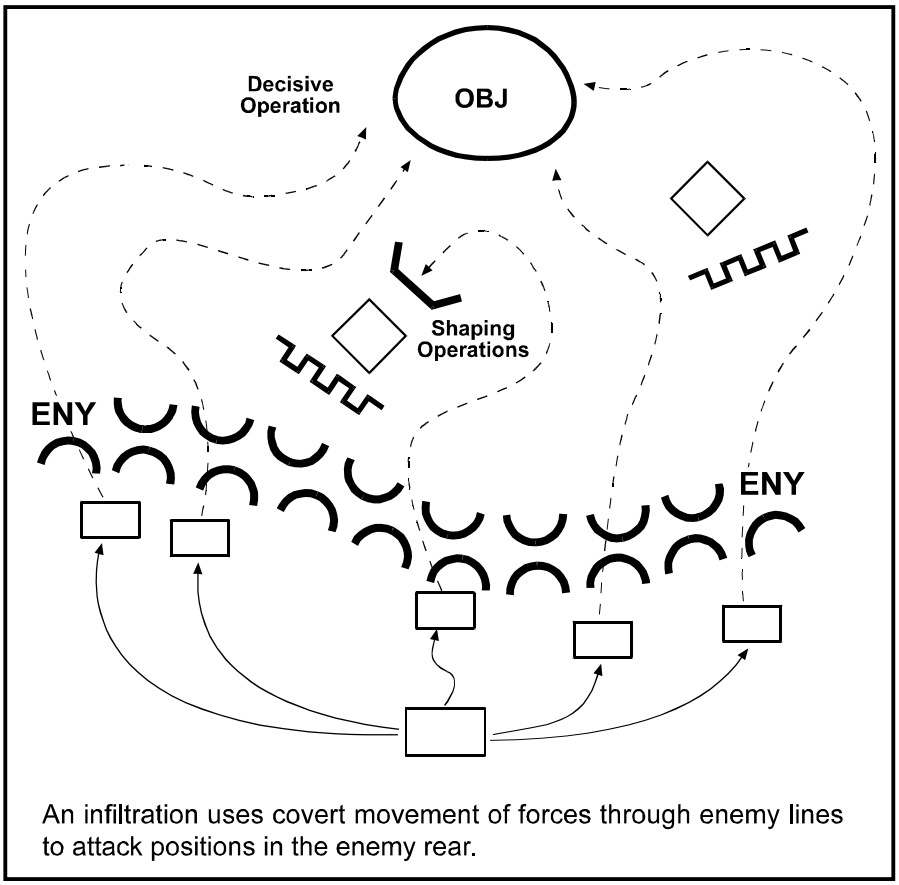

Decisive Operation
OBJ
Shaping Operations
ENY
ENY
An infiltration uses covert movement of forces through enemy lines to attack positions in the enemy rear.

Figure 7-4. Infiltration

PENETRATION

7-37. **A *penetration* is a form of maneuver in which an attacking force seeks to rupture enemy defenses on a narrow front to disrupt the defensive system** (see Figure 7-5, page 7-14). Commanders direct penetrations when enemy flanks are not assailable or time does not permit another form of maneuver. Successful penetrations create assailable flanks and provide access to enemy rear areas. Because penetrations frequently are directed into the front of the enemy defense, they risk significantly more friendly casualties than envelopments, turning movements, and infiltrations.

7-38. Swift concentration and audacity are particularly important during a penetration. Commanders mass effects from all available fires at the point of penetration to make the initial breach. Then they widen the penetration by enveloping enemy units on its shoulders and pass forces through to secure objectives in the enemy rear or defeat the penetrated enemy forces in detail. Forces making the initial breach move rapidly to avoid enemy counterattacks to their flanks. Follow-on forces secure the shoulders and widen the breach. Throughout all phases, fires in depth target enemy indirect fire assets, units along the shoulders of the penetration, and counterattack forces. Other friendly forces fix enemy forces that can move against the penetration with attacks, fires, feints, and demonstrations.

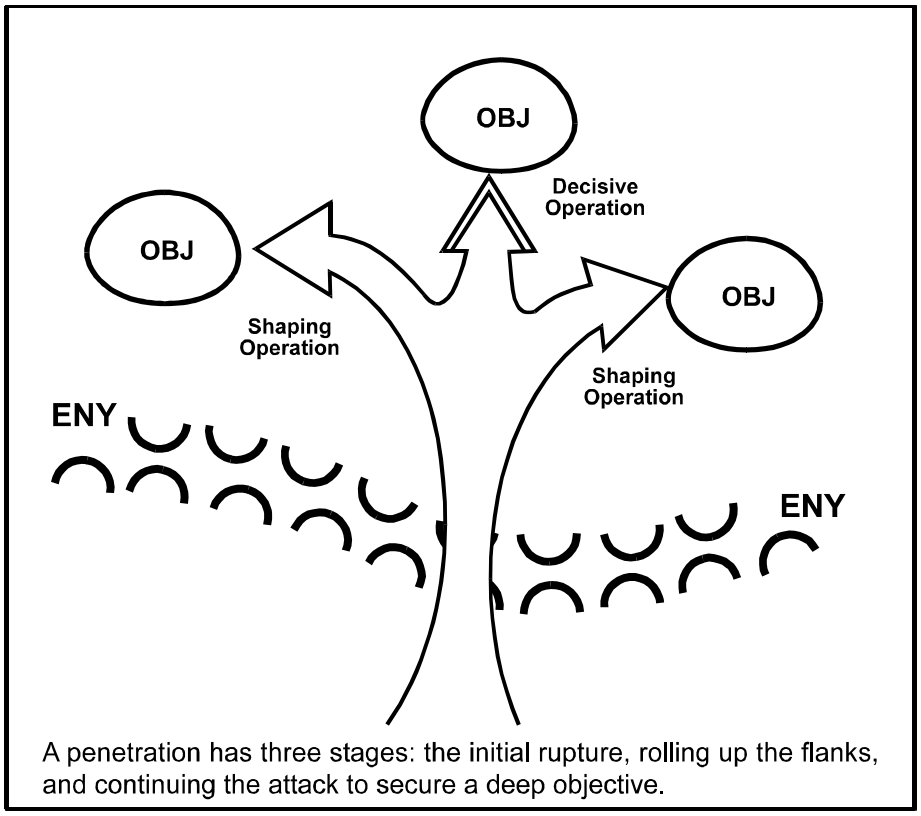


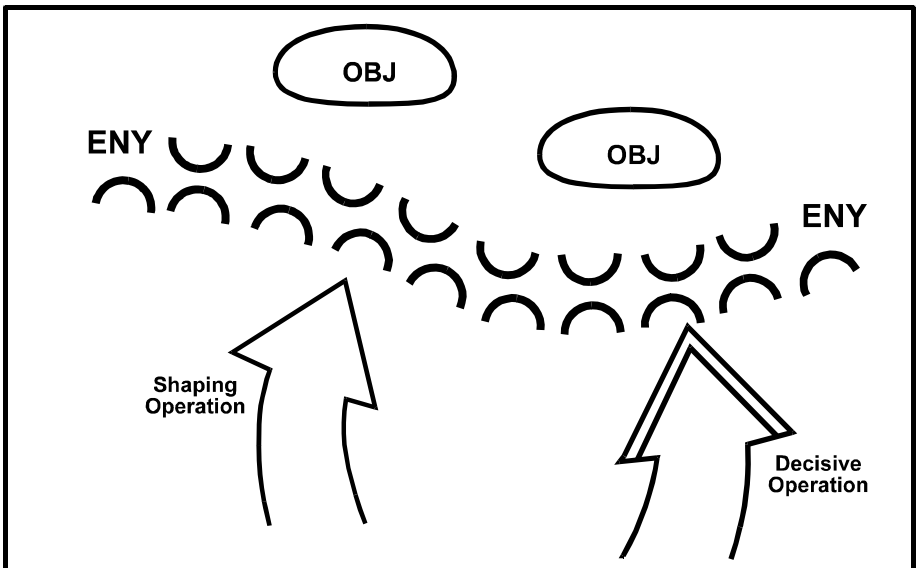
Figure 7-5. Penetration

7-39. If sufficient combat power is available, operational commanders may direct multiple penetrations. Commanders carefully weigh the advantage of such attacks. Multiple penetrations force the enemy to disperse his fires and consider multiple threats before committing his reserves. Commanders then decide how to sustain and exploit multiple penetrations and whether penetrating forces converge on one deep objective or attack multiple objectives. At the tactical level, there is normally insufficient combat power to conduct more than one penetration.

FRONTAL ATTACK

7-40. **A *frontal attack* is a form of maneuver in which an attacking force seeks to destroy a weaker enemy force or fix a larger enemy force in place over a broad front** (see Figure 7-6). At the tactical level, an attacking force can use a frontal attack to rapidly overrun a weaker enemy force. A frontal attack strikes the enemy across a wide front and over the most direct approaches. Commanders normally use it when they possess overwhelming combat power and the enemy is at a clear disadvantage. Commanders mass the effects of direct and indirect fires, shifting indirect and aerial fires just before the assault. Success depends on achieving an advantage in combat power throughout the attack.

7-41. The frontal attack is frequently the most costly form of maneuver, since it exposes the majority of the attackers to the concentrated fires of the defenders. As the most direct form of maneuver, however, the frontal attack is useful for overwhelming light defenses, covering forces, or disorganized enemy resistance. It is often the best form of maneuver for hasty attacks and meeting engagements, where speed and simplicity are essential to maintain tempo and the initiative. Commanders may direct a frontal attack as a shaping operation and another form of maneuver as the decisive operation. Commanders may also use the frontal attack during an exploitation or pursuit. Commanders of large formations conducting envelopments or penetrations may direct subordinate elements to conduct frontal attacks as either shaping operations or the decisive operation.



A frontal attack is conducted across a wide front over the most direct approach.

Figure 7-6. Frontal Attack

TYPES OF OFFENSIVE OPERATIONS

7-42. The four types of offensive operations are movement to contact, attack, exploitation, and pursuit. Commanders direct these offensive operations sequentially and in combination to generate maximum combat power and destroy the enemy. For instance, a successful attack may lead to an exploitation, which can lead to a pursuit. A deliberate attack to complete the enemy's destruction can follow a pursuit. In other cases, commanders may direct an attack against the enemy during a pursuit to slow his withdrawal.

7-43. Commanders combine and sequence movements to contact, attacks, exploitations, and pursuits to gain the greatest advantage. Attacks do not always lead to exploitations and pursuits. For example, spoiling attacks, feints, and demonstrations rarely develop into exploitations; however, circumstances may allow commanders to exploit an unexpected success with a full-scale attack.

7-44. Commanders recognize that the many types of offensive and defensive operations may run together with no discernible break. They employ spoiling attacks while defending to slow the enemy tempo until they are ready to attack. As they prepare to transition from one offensive operation to another, or from offense to defense, commanders can conduct a feint in one area to divert enemy attention from operations elsewhere.

7-45. A form of troop movement often precedes an offensive operation. The three forms of troop movement are administrative movement, tactical road march, and approach march.

- An *administrative movement* is a movement in which troops and vehicles are arranged to expedite their movement and conserve time and energy when no enemy interference, except by air, is anticipated. Administrative movements occur in areas where enemy forces do not pose an immediate threat to operations and heightened security is not necessary.
- **A *tactical road march* is a rapid movement used to relocate units within an area of operations to prepare for combat operations**. Although contact with enemy forces is not anticipated, security against air attack, enemy SOF, and sympathizers is maintained and the unit is prepared to take immediate action against an enemy threat. Tactical road marches occur when a force must maintain security or when movements occur within range of enemy influence. Commanders may still execute tactical road marches in low-threat environments to maintain C2 and meet specific movement schedules.
- **An *approach march* is the advance of a combat unit when direct contact with the enemy is intended**. Soldiers are fully or partially deployed. Commanders direct an approach march when they are relatively certain of the enemy location and are a considerable distance from it. They decide where their forces can deploy into attack formations that facilitate the initial contact and still provide freedom of action for the bulk of their forces. In contiguous AOs, a passage of lines often precedes or follows an approach march.

MOVEMENT TO CONTACT

7-46. **The *movement to contact* is a type of offensive operation designed to develop the situation and establish or regain contact**. Forces conducting a movement to contact seek to make contact with the smallest force feasible. On contact, the commander has five options: attack, defend, bypass, delay, or withdraw.

7-47. A successful movement to contact requires units with sufficient mobility, agility, and combat power to gain enemy contact and rapidly develop the situation. Six fundamentals apply:

- Focus all efforts on finding the enemy.
- Make initial contact with the smallest element possible, consistent with protecting the force.
- Make initial contact with small, mobile, self-contained forces to avoid decisive engagement of the main body on ground chosen by the enemy. Doing this allows the commander maximum flexibility to develop the situation.
- Task organize the force and use movement formations to deploy and attack rapidly in any direction.
- Keep forces postured within supporting distances to facilitate a flexible response.
- Maintain contact once gained.

7-48. Commanders organize forces to provide all-around security. This normally requires advance, flank, and rear guards. They lead with a combined arms security force to locate and fix the enemy. Corps and divisions normally organize a powerful, self-contained covering force to do this. Smaller formations organize security forces within the limits of their resources. Commanders employ the security force far enough ahead of the main body to provide enough time and space to react to enemy contact. Guard formations remain within supporting range of the main body. Advance and flank guards perform continuous reconnaissance to the front and flanks of the main body. They destroy or suppress small enemy forces so they cannot threaten the main body. The advance guard moves as fast and as far ahead of the main body as possible without moving beyond supporting range. The main body provides the advance guard, normally organized as a separate element. Main body units normally provide and control flank and rear security forces.

> ***Supporting distance*** **is the distance between two units that can be traveled in time for one to come to the aid of the other. For small units, it is the distance between two units that can be covered effectively by their fires.**
>
> ***Supporting range*** **is the distance one unit may be geographically separated from a second unit, yet remain within the maximum range of the second unit's indirect fire weapons systems.**

7-49. Security forces remain oriented on the main body, taking into account enemy capabilities and the terrain. They bypass or breach obstacles in stride.

Commanders decentralize movement authority to leaders on the front and flanks. Normally, commanders should position themselves well forward during movements to contact.

Search and Attack

7-50. ***Search and attack* is a technique for conducting a movement to contact that shares many of the characteristics of an area security mission**. Light and medium maneuver units, attack aviation, air cavalry, and air assault units normally conduct them. The purpose of a search and attack operation is to destroy enemy forces, protect the friendly force, deny an area to the enemy, or collect information. Commanders direct search and attack when the enemy disperses in close terrain unsuited for heavy forces, when they cannot find enemy weaknesses, or when they want to deny the enemy movement in an area. They also direct search and attack against enemy infiltrators or SOF operating in a given area. Search and attack is useful in area security missions, such as clearing AOs.

Meeting Engagement

7-51. A ***meeting engagement* is a combat action that occurs when a moving force engages an enemy at an unexpected time and place**. Such encounters normally occur by chance in small unit operations, typically when two moving forces collide. They may result in brigade or larger unit operations when intelligence, surveillance, and reconnaissance (ISR) operations have been ineffective. Meeting engagements can also occur when opposing forces are aware of the general presence but not the exact location of each other and both decide to attack immediately. On contact, commanders quickly act to gain the advantage. Speed of action and movement, coupled with both direct and indirect fires, are essential. To maintain momentum, lead elements quickly bypass or fight through light resistance. Freedom to maneuver is always advantageous; however, commanders may choose to establish a hasty defense if the enemy force is larger or the terrain offers a significant benefit.

7-52. The initiative and audacity of small unit leaders are essential for the friendly force to act faster than the enemy. Commanders balance focusing combat power rapidly with keeping other options open and maintaining pressure on the enemy. In meeting engagements, the force that gains and retains the initiative wins. Commanders seize and maintain the initiative through battle command: rapidly visualizing the situation, deciding what to do, and directing forces to destroy enemy combat power. A successful meeting engagement fixes or reduces the enemy force with maneuver and massed, overwhelming fires—both direct and indirect—while the friendly force bypasses or attacks it.

ATTACK

7-53. **An *attack* is an offensive operation that destroys or defeats enemy forces, seizes and secures terrain, or both**. Attacks incorporate coordinated movement supported by direct and indirect fires. They may be either decisive or shaping operations. Attacks may be hasty or deliberate, depending on the time available for assessing the situation, planning, and preparing. Commanders execute hasty attacks when the situation calls for

immediate action with available forces and minimal preparation. They conduct deliberate attacks when there is time to develop plans and coordinate preparations (see FM 3-90). The same fundamentals of the offense apply to each type of attack. Success depends on skillfully massing the effects of combat power.

Types of Attack

- Hasty
- Deliberate
- Special Purpose
  - Spoiling
  - Counterattack
  - Raid
  - Ambush
  - Feint
  - Demonstration

Hasty Attack

7-54. Commanders direct hasty attacks to seize opportunities to destroy the enemy or seize the initiative. These opportunities are fleeting. They usually occur during movements to contact and defensive operations. In a hasty attack, commanders intentionally trade the advantages of thorough preparation and full synchronization for those of immediate execution. In a movement to contact, commanders launch hasty attacks to destroy enemy forces before they concentrate or establish a defense. In the defense, commanders direct hasty attacks to destroy an exposed or overextended attacker. On-order and be-prepared missions allow units to respond quickly in uncertain situations.

7-55. Once they decide to attack, commanders execute as quickly as possible. While hasty attacks maximize the effects of agility and surprise, they incur the risk of losing some synchronization. To minimize this risk, commanders make maximum use of standing operating procedures (SOPs) that include standard formations and well-understood and rehearsed battle drills. Supporting arms and services organize and position themselves to react quickly, using prearranged procedures. Habitual relationships among supported and supporting units at all echelons facilitate these actions.

Deliberate Attack

7-56. In contrast to hasty attacks, deliberate attacks are highly synchronized operations characterized by detailed planning and preparation. Deliberate attacks use simultaneous operations throughout the AO, planned fires, shaping operations, and forward positioning of resources needed to sustain momentum. Commanders take the time necessary to position forces and develop sufficient intelligence to strike the enemy with bold maneuver and accurate, annihilating fires. Because of the time required to plan and prepare deliberate attacks, commanders often begin them from a defensive posture. However, an uncommitted force may conduct a deliberate attack as a sequel to an ongoing offensive operation.

7-57. Time spent preparing a deliberate attack may allow the enemy to improve defenses, retire, or launch a spoiling attack. Therefore, commanders direct deliberate attacks only when the enemy cannot be bypassed or overcome with a hasty attack. Commanders maintain pressure on the enemy while they plan and prepare. They aggressively disrupt enemy defensive preparations through aggressive patrolling, feints, limited-objective attacks, harassing indirect fires, air strikes, and offensive IO.

7-58. Deliberate attacks require extensive planning and coordination, to include positioning reserves and follow-on forces while preparing troops and

equipment. Commanders and staffs refine plans based on rehearsals and intelligence from reconnaissance and surveillance. Commanders conduct IO to deceive the enemy and prevent him from exercising effective C2. Effective IO mask attack preparations and conceal friendly intentions and capabilities. Commanders direct reconnaissance and surveillance missions to collect information about the enemy and AO. The intelligence system analyzes this information to find weaknesses in enemy capabilities, dispositions, or plans. Friendly forces exploit enemy weaknesses before and during the attack. Effective information management (IM) routes data collected by reconnaissance and surveillance assets to the right place for analysis. IM also facilitates rapid dissemination of intelligence products to forces that need them.

Special Purpose Attacks

7-59. Certain forms of attack employ distinctive methods and require special planning. Commanders direct these special purpose attacks to achieve objectives different from those of other attacks. Spoiling attacks and counterattacks are usually phases of a larger operation. Raids and ambushes are generally single-phased operations conducted by small units. Feints and demonstrations are military deception operations.

7-60. **Spoiling Attack. A *spoiling attack* is a form of attack that preempts or seriously impairs an enemy attack while the enemy is in the process of planning or preparing to attack**. Normally conducted from a defensive posture, spoiling attacks strike where and when the enemy is most vulnerable—during preparations for attack in assembly areas and attack positions or while he is moving toward his line of departure. Therefore, proper timing and coordinating with higher headquarters are critical requirements for them. Spoiling attacks are highly dependent on accurate information on enemy dispositions. Commanders are alert for opportunities to exploit advantages created by a spoiling attack.

7-61. **Counterattack. A *counterattack* is a form of attack by part or all of a defending force against an enemy attacking force with the general objective of denying the enemy his goal in attacking**. Commanders normally conduct counterattacks from a defensive posture; they direct them to defeat or destroy enemy forces or to regain control of terrain and facilities after enemy successes. Commanders direct counterattacks with reserves, lightly committed forward elements, or specifically assigned forces. They counterattack after the enemy launches an attack, reveals his main effort, or offers an assailable flank.

7-62. Commanders conduct counterattacks much like other operations, synchronizing them within the overall effort. When possible, units rehearse and prepare the ground. Counterattacking forces may conduct local exploitations to take advantage of tactical opportunities, but then usually resume a defensive posture. Large-unit headquarters preplan counterattacks as major exploitations and pursuits. In those cases, a counterattack may be the first step in seizing the initiative and transitioning to offensive operations. A counterattack is the decisive operation in a mobile defense.

7-63. **Raid**. A raid is a form of attack, usually small scale, involving a swift entry into hostile territory to secure information, confuse the enemy, or

destroy installations. It usually ends with a planned withdrawal from the objective area upon mission completion. Raids have narrowly defined purposes. They require both detailed intelligence and deliberate planning. Raids may destroy key enemy installations and facilities, capture or free prisoners, or disrupt enemy C2 or other important systems.

7-64. **Ambush. An *ambush* is a form of attack by fire or other destructive means from concealed positions on a moving or temporarily halted enemy**. An ambush destroys enemy forces by maximizing the element of surprise. Ambushes can employ direct fire systems or other destructive means, such as command-detonated mines, nonlethal fires, and indirect fires. Ambushes can disrupt enemy cohesion, sense of security, and confidence. They are particularly effective against enemy sustaining operations.

7-65. **Feint. A *feint* is a form of attack used to deceive the enemy as to the location or time of the actual decisive operation. Forces conducting a feint seek direct fire contact with the enemy but avoid decisive engagement**. Feints divert attention from the decisive operation and prevent the enemy from focusing combat power against it. They are usually shallow, limited-objective attacks conducted before or during the decisive operation. During Operation Desert Storm, units of the 1st Cavalry Division conducted feints in the Ruqi pocket before 24 February 1991. The purpose of these feints was to fix Iraqi frontline units and convince Iraqi commanders that the coalition decisive operation would occur along the Wadi al-Batin.

7-66. **Demonstration. A *demonstration* is a form of attack designed to deceive the enemy as to the location or time of the decisive operation by a display of force. Forces conducting a demonstration do not seek contact with the enemy**. Demonstrations are also shaping operations. They seek to mislead the enemy concerning the attacker's true intentions. They facilitate decisive operations by fixing the enemy or diverting his attention from the decisive operation. Commanders allow the enemy to detect a demonstration. However, doing this without revealing the demonstration's true purpose requires skill. If a demonstration reveals an enemy weakness, commanders may follow it with another form of attack.

EXPLOITATION

7-67. An exploitation is a type of offensive operation that usually follows a successful attack and is designed to disorganize the enemy in depth. Exploitations seek to disintegrate enemy forces to the point where they have no alternative but surrender or flight. Commanders of exploiting forces receive the greatest possible latitude to accomplish their missions. They act with great aggressiveness, initiative, and boldness. Exploitations may be local or major. Local exploitations take advantage of tactical opportunities, foreseen or unforeseen. Division and higher headquarters normally plan major exploitations as branches or sequels.

7-68. Attacks that completely destroy a defender are rare. More often, the enemy attempts to disengage, withdraw, and reconstitute an effective defense as rapidly as possible. In large-scale operations, the enemy may attempt to mass combat power against an attack by moving forces from less active areas

or committing reserves. During exploitations, commanders execute simultaneous attacks throughout the AO to thwart these enemy actions.

7-69. During attacks, commanders remain alert to opportunities for exploitation. Indicators include—

- Large numbers of prisoners and the surrender of entire enemy units.
- Enemy units disintegrating after initial contact.
- A lack of an organized defense.
- The capture or absence of enemy leaders.

7-70. Commanders plan to exploit every attack unless restricted by higher headquarters or exceptional circumstances. Exploitation pressures the enemy, compounds his disorganization, and erodes his will to resist. Upon shattering enemy coherence, attacking forces strike targets that defeat enemy attempts to regroup. Attackers swiftly attack command posts, sever escape routes, and strike enemy reserves, field artillery, and critical combat support and CSS assets.

7-71. Opportunities for local exploitations may emerge when the main effort is elsewhere in the AO. Commanders vary tempos among subordinate commands to take advantage of these opportunities while continuing to press the main effort. Simultaneous local exploitations at lower echelons can lead to a major exploitation that becomes the decisive operation.

7-72. Exploiting success is especially important after a deliberate attack in which the commander accepted risk elsewhere to concentrate combat power for the decisive operation. Failure to exploit aggressively the success of the decisive operation may allow the enemy to detect and exploit a friendly weakness and regain the initiative.

7-73. When possible, lead forces transition directly into an exploitation. If that is not feasible, commanders pass fresh forces into the lead. Exploitations require the physical and mental aggressiveness to combat the friction of night, bad weather, possible fratricide, and extended operations.

7-74. Successful exploitations demoralize the enemy and disintegrate his formations. Commanders of exploiting units anticipate this situation and prepare to transition to a pursuit. They remain alert for opportunities that develop as enemy cohesion and resistance break down. Commanders posture CSS forces to support exploitation opportunities.

PURSUIT

7-75. A pursuit is a type of offensive operation designed to catch or cut off a hostile force attempting to escape with the aim of destroying it. Pursuits are decisive operations that follow successful attacks or exploitations. They occur when the enemy fails to organize a defense and attempts to disengage. If it becomes apparent that enemy resistance has broken down entirely and the enemy is fleeing, a force can transition to a pursuit from any type of offensive operation. Pursuits encompass rapid movement and decentralized control. Unlike exploitations, commanders can rarely anticipate pursuits, so they normally do not hold forces in reserve for them.

7-76. For most pursuits, commanders designate a direct pressure force and an encircling or enveloping force. The direct pressure force maintains pressure against the enemy to keep him from establishing a coherent defense. The encircling force conducts an envelopment or a turning movement to block the enemy's escape and trap him between the two forces. The trapped enemy force is then destroyed. The encircling force must have greater mobility than the pursued enemy force. Joint air assets and long-range precision fires are essential for slowing enemy movement.

7-77. Exploitations and pursuits test the audacity and endurance of soldiers and leaders. After an attack, soldiers are tired and units have suffered personnel and materiel losses. As an exploitation or pursuit unfolds, LOCs extend and commanders risk culmination. Commanders and units must exert extraordinary physical and mental effort to sustain momentum, transition to other operations, and translate tactical success into operational or strategic victory.

CONDUCTING OFFENSIVE OPERATIONS

7-78. Commanders direct the operations process. They strive for continuous attacks at tempos the enemy cannot match. Commanders visualize the situation, make effective decisions, and assess the planning, preparation for, and execution of offensive operations. Staffs help commanders anticipate the outcome of current and planned operations. Commanders apply judgment to develop the situational understanding upon which they base decisions that lead to mission success (see FM 6-0).

PLANNING CONSIDERATIONS FOR OFFENSIVE OPERATIONS

7-79. Commanders plan to attack enemy forces and systems simultaneously throughout the AO to seize the initiative, exploit success, and maintain momentum. In the decisive operation, commanders focus combat power to defeat the enemy. They conceive simple plans by assessing and visualizing their battlespace and mission. Commanders select the best course of action and develop a concept of operations that ensures mission accomplishment.

7-80. Commanders tailor their concept of operations to the situation. Offensive plans—

- Allow rapid concentration and dispersal of units.
- Introduce fresh forces to exploit success while resting other forces.
- Protect the force.
- Facilitate transition to future operations.
- Sustain forces throughout the operation.

Offensive planning may occur while units defend. Plans anticipate shifting efforts and transitioning to other forms of attack to exploit opportunities. By planning to exploit success, commanders avoid losing momentum.

7-81. Staffs analyze the situation in terms of METT-TC to understand the mission and to prepare estimates. Staff sections maintain current estimates for their functional fields or battlefield operating system throughout an offensive operation. Commanders incorporate staff estimates into their visualization. As the operation unfolds and the situation changes, commanders

continuously assess threats and opportunities and decide whether to modify the concept of operations (see FM 5-0).

Mission

7-82. Commanders provide their subordinates with a clear statement of what to accomplish and why—the mission. They anticipate likely developments. To prepare subordinates for subsequent actions, commanders give them their superior's mission and intent, tell them what they envision for the future, and issue warning orders as appropriate. To maintain momentum, they assign subordinates tasks that encompass the full scope of the operation. Some offensive operations, such as deliberate attacks, require greater control and coordination. However, whenever possible, commanders assign force-oriented objectives and AOs and avoid restrictive control measures.

Enemy

7-83. In offensive operations, commanders look for gaps or weaknesses in enemy defenses. They study enemy defensive preparations and direct actions to obstruct and frustrate them. They set priorities for ISR operations. They plan to penetrate enemy security areas, overcome obstacles, avoid enemy strengths, and destroy the coherence of the defense. Success requires an active, responsive intelligence effort oriented on critical units and areas.

Terrain and Weather

7-84. Commanders select avenues of approach that orient on key terrain and provide maneuver opportunities for attackers. Good avenues of approach permit rapid advance, provide cover and concealment, allow good communications, and are hard to block with obstacles. Commanders exploit weather conditions that affect mobility, concealment, and air support. They need tactical weather forecasts that focus on how weather might affect the operation.

7-85. Terrain designated for the decisive operation should allow for rapid movement into the enemy rear. Commanders typically identify and avoid terrain that will hinder a rapid advance; however, an initial maneuver over difficult terrain may surprise defenders. Commanders personally reconnoiter the terrain whenever possible, particularly the terrain where they will conduct the decisive attack.

7-86. Attackers pay particular attention to obstacles. Commanders plan to negotiate or avoid urban areas, rivers, extreme slopes, thick forests, or soft ground. Such terrain, when it parallels axes of advance, can protect attackers' flanks. Light forces can use such areas as avenues of approach, or they can defend from them, freeing heavier forces for maneuver. To deny key terrain to the enemy, commanders seize it or control it by fire. Most offensive operations are force-oriented; however, attacks can focus on decisive terrain.

7-87. Weather and visibility conditions affect offensive operations. Concealment and protection from air attacks that weather or light conditions offer is important, especially for air assault and airborne operations. Ground conditions affect the number of avenues available and movement speed. Inclement weather also increases heavy force maintenance and CSS requirements.

Troops and Support Available

7-88. Commanders consider a unit's readiness and its leaders' experience when assigning missions. They take into account their force's mobility, protection, and firepower relative to enemy capabilities.

7-89. Commanders employ units according to their capabilities and limitations. The number of possible force combinations enhances agility. Dismounted infantry can attack through heavy cover or penetrate antiarmor defenses to open approaches for armored and mechanized forces. Air assault and airborne units can seize objectives in depth to block enemy reserves or secure choke points. Armor can move rapidly through gaps to disorganize the defense. Field and air defense artillery, engineer, and chemical units provide critical support. Aviation maneuvers to attack the enemy throughout the AO.

7-90. Attackers carefully integrate CSS operations into plans. Effective CSS is especially important during high-tempo operations. Habitually associating combat units with the CSS units that support them facilitates it. When plans call for attacking units to pass through defending units, defending units assist CSS operators in conducting sustaining operations.

Time Available

7-91. Commanders consider the risk involved when deciding how much time to allocate to planning and preparing an offensive operation. The more time attackers take to plan and prepare, the more time defenders have to improve their defenses. Attackers reduce the time available to the enemy by operating at a high tempo, achieving surprise, and avoiding detection. Defenders gain time by delaying and disrupting attacks. In all cases, commanders give as much time as possible to their subordinates for planning.

7-92. Modern telecommunications capabilities and activities in the information environment may reduce the time available to plan and prepare. Modern information systems reduce the time required to collect and process information. This reduction may provide advantages for either attackers or defenders. Commanders who act quickly and make good decisions retain the initiative in fast-moving situations. Activities in the information environment, such as live news broadcasts of pending or ongoing attacks, may reduce the time available to accomplish a mission.

Civil Considerations

7-93. Civil considerations are present throughout offensive operations. Commanders focus their staffs on considerations that may affect mission accomplishment. These factors include care and support for civilians within the AO and the possible effect of refugees on operations and movements. Other considerations include enemy locations with respect to civil populations, political and cultural boundaries, and language requirements. Civil considerations may preclude the attack of some targets, such as infrastructure and historically significant areas. They may also limit the use of land mines.

7-94. Enemy propaganda may affect the attitude of civilians in the AO. It may also affect domestic and foreign support for the operation. Operational commanders pay particular attention to the effects of actions in the information environment. Tactical commanders may have limited awareness of

media reporting and its effect on public opinion. Operational commanders gauge the effect of public opinion and keep their subordinates informed.

PREPARING FOR OFFENSIVE OPERATIONS

7-95. Preparation postures the force to begin offensive operations. It includes assembling and positioning necessary resources. At the operational level, commanders arrange forces and resources to allow dispersion, responsiveness, protection, and sustainment, while retaining the ability to mass effects quickly. Commanders assign units a position and time to begin or support the attack. Selected friendly forces start conducting shaping and sustaining operations to develop opportunities for the entire force. To preserve surprise, attacking forces avoid and mask actions that could alert the enemy.

7-96. Preparation includes reconnaissance operations conducted concurrently with planning (see FM 5-0). Reconnaissance collects information that is processed into intelligence and incorporated into plans. Intelligence tasks for offensive operations include identifying and locating enemy reserves, locating and tracking enemy fire support systems, and gathering information about enemy intelligence, air, and air defense capabilities. Conducting aggressive reconnaissance and surveillance, integrating joint collection assets, and exploiting the capabilities of information systems allow commanders to assess enemy capabilities and anticipate his reactions. Rehearsals help subordinates fully understand the commander's intent and how their actions relate to those of other friendly forces and contribute to the overall operation.

7-97. Sustaining operations create conditions for executing an attack suddenly, violently, and efficiently. More important, they help preserve freedom of action as one operation or phase ends and another begins. At the operational level, sustainment is a key consideration in linking battles within major operations. CSS forces prepare by positioning supplies and units to support the operation. Movement control, terrain management, and engineer-conducted mobility operations contribute to efficient movements. Engineers also conduct countermobility operations to protect flanks. As in all operations, air defense forces protect the force from air and missile attack.

EXECUTING OFFENSIVE OPERATIONS

7-98. Offensive operations require rapid shifts in the focus of combat power to take advantage of opportunities. Sustaining a tempo the enemy cannot match is vital to success. Commanders vary the tempo and methods of attack, while maintaining momentum. Units press the fight. A commander's ability to continually anticipate and visualize both enemy and friendly situations is essential. Making timely decisions is likewise important.

7-99. Commanders increase the tempo of an operation through reconnaissance and by providing the proper field artillery and other combat support, including air support. They maintain a high tempo by passing forces forward and minimizing the time friendly forces spend under fire. Attacks succeed only if they achieve their objective before the enemy recovers his balance, identifies the threat, and masses combat power against it. Attackers must keep the enemy off balance as long as possible and maintain the momentum

of the attack. Successful attacks maintain a tempo and degree of lethality that the enemy cannot match.

7-100. ISR and IM provide commanders with enough relevant information to direct their attack. Commanders attack once they have sufficient information, even if it is not comprehensive. They can seize the initiative by attacking, even without a detailed operational picture or COP.

7-101. The violence and intensity of the assault unhinges the coherence of the enemy's defense. Precision fires and IO allow attackers to strip away enemy security forces, cripple enemy C2 and CSS, and mislead defenders as to the true objective of the attack. The combined effects of these and other actions hinder the enemy's ability to make decisions. As attacking forces assault the objective, fires shift, fixing the enemy in depth and denying him the use of reserves. Whether seeking to destroy an enemy force or to seize terrain, the attacking force does not slow until it achieves success. A high tempo contributes to protection and enhances security.

7-102. Commanders integrate fires with maneuver throughout offensive operations. Accomplishing this requires detailed planning and coordination between assaulting and supporting forces, precise execution, and careful control of fire support. Dismounted assault forces move as closely behind their fires as possible. Armored forces attack under overhead field artillery fire. Air assault and airborne forces land directly on or as near to objectives as possible, once defenders and supporting field and air defense artillery have been suppressed or destroyed. As attackers near the enemy force, they overcome resistance with violent, massed firepower and rapid movement. Speed during this phase is essential to reduce casualties and avoid becoming stalled. Air defense and joint air assets destroy enemy air threats. Attack aviation strikes against uncommitted forces and reserves to isolate current engagements, shape future battles, and deny the enemy options.

7-103. Attackers quickly move through the objective, destroying remaining enemy resistance. They anticipate a counterattack by maneuver forces, indirect fires, or aircraft. Security is paramount, as the attacker now occupies a position known to the enemy. Attackers consolidate on the objective, reorganize to meet a counterattack, prepare for the next mission, or continue the attack. If the situation allows, commanders immediately begin an exploitation, either with the same force or by passing follow-on forces through the objective area. Reconstitution may be necessary to return units to the fight. Initial attacking forces may reconstitute as follow-on forces pass forward.

7-104. To maintain offensive momentum, commanders direct the introduction of fresh troops into the attack. Passing follow-on forces allows commanders to rest soldiers, resupply units, and move them to new areas and missions. The introduction of fresh troops is most common when forces enter an exploitation or pursuit, but may be necessary during the attack itself if committed forces cannot reach their objectives. Commanders usually commit fresh troops through a forward passage of lines to maintain the tempo and avoid a significant pause. A forward passage may occur before or after the attack starts. For it to be successful, a forward passage must be concealed from the enemy.

7-105. Forward passages of lines and offensive reliefs require detailed planning and preparation. Planning a passage includes determining the battle

handover criteria that designate when the passing force assumes the fight from the stationary force. The common higher headquarters of the two forces designates control measures for the passage. Subordinate commanders coordinate the details. During a passage, the stationary force provides all possible support to the passing force. The stationary force integrates its direct and indirect fires into the fire support plan of the passing force.

THE IMPACT OF TECHNOLOGY

7-106. Technology is changing the ways that modernized Army forces attack. Information technology allows commanders and subordinates to share a COP tailored to each echelon. Commanders throughout the attacking force use it to achieve greater situational understanding. They conduct operations based on more accurate and current information than ever before. Commanders may now lead from the front while remaining fully connected to the C2 system and the information it provides. Situational understanding, supported by the COP, allows commanders to synchronize their forces effectively and make rapid adjustments as the situation changes. Subordinates can view the overall situation and exercise initiative to achieve the commander's intent without waiting for higher headquarters to provide direction.

7-107. Situational understanding based on an accurate COP changes the nature of maneuver before and during attacks. With it, Army forces depend less on movements to contact and meeting engagements to create the conditions to attack. Modernized Army forces may avoid movements to contact altogether, developing the situation largely out of contact. Advanced surveillance and reconnaissance assets refine the picture of the enemy, while precision fires and IO destroy enemy cohesion. Reconnaissance and security elements maintain contact only as required to collect information that unmanned sensors cannot. Commanders maneuver forces into position to begin the attack before major forces make contact. Attacks unfold as simultaneous sets of blows that bewilder and shock enemy forces. Attacks become opportunistic and fluid as commanders mass the effects of combat power swiftly and decisively and exploit the results ruthlessly.

7-108. Fusing information from C2, ISR, indirect fire, and CSS systems increases tempo and the number of offensive options. Greater awareness of enemy and friendly forces means attacks need not originate from one place. Better situational understanding allows commanders to shift forces and efforts from one area to another to exploit opportunities. Nonlinear operations in noncontiguous AOs occur more frequently. Commanders project attacking forces on multiple axes throughout the AO. Lines of operations in the offense are related less by space than they are by purpose; thus, commanders bypass some enemy forces while focusing combat power at the decisive point. Exploiting opportunities that result from efficiently fusing information and determining its significance secures the initiative with attackers.

Chapter 8

Defensive Operations

Little minds try to defend everything at once, but sensible people look at the main point only; they parry the worst blows and stand a little hurt if thereby they avoid a greater one. If you try to hold everything, you hold nothing.

Frederick the Great

8-1. Army forces defend until they gain sufficient strength to attack. Defensive operations defeat an enemy attack, buy time, economize forces, or develop conditions favorable for offensive operations. Alone, defensive operations normally cannot achieve a decision. Their purpose is to create conditions for a counteroffensive that allows Army forces to regain the initiative. Although offensive operations are usually required to achieve decisive results, it is often necessary, even advisable at times, to defend. Commanders defend to buy time, hold terrain, facilitate other operations, preoccupy the enemy, or erode enemy resources.

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PURPOSES OF DEFENSIVE OPERATIONS

8-2. The purpose of defensive operations is to defeat enemy attacks. Defending forces await the attacker's blow and defeat the attack by successfully deflecting it. Waiting for the attack is not a passive activity. Army commanders seek out enemy forces to strike and weaken them before close combat begins.

8-3. Operationally, defensive operations buy time, economize forces, and develop conditions favorable for resuming offensive operations. Therefore, major operations and campaigns combine defensive operations with offensive

operations. Operational-level defensive operations normally include offensive, stability, and support operations.

8-4. During force projection, defensive operations by in-theater or early arriving forces can maintain the operational initiative for joint or multinational forces. If conditions do not support offensive operations, initial-entry forces defend the lodgment while the joint force commander builds combat power. Initial-entry forces should include sufficient combat power to deter, attack, or defend successfully.

CHARACTERISTICS OF DEFENSIVE OPERATIONS

8-5. Successful defenses are aggressive; they use direct, indirect, and air-delivered fires; information operations (IO); and ground maneuver to strike the enemy. They maximize firepower, protection, and maneuver to defeat enemy forces. Static and mobile elements combine to deprive the enemy of the initiative. The defender resists and contains the enemy. Defending commanders seek every opportunity to transition to the offensive.

8-6. While the fundamentals of the defense continue to apply to a modernized force, advanced technology systems modify the way commanders conduct defensive operations. Greater understanding of friendly and enemy situations and the fusion of command and control (C2); intelligence, surveillance, and reconnaissance (ISR); long-range precision fires; and combat service support (CSS) technologies make the mobile defense even more lethal and effective. Whenever practical, commanders of modernized forces use the mobile defense because it takes maximum advantage of Army force strengths.

8-7. An effective defense engages the enemy with static and mobile forces. It combines the elements of combat power to erode enemy strength and create conditions for a counterattack. Defenders seek to increase their freedom to maneuver while denying it to the attacker. The enemy falters as losses increase and the initiative shifts to the defender, allowing counterattacks. Counterattack opportunities rarely last long; defenders strike swiftly to force the enemy to culminate. Preparation, security, disruption, massing effects, and flexibility all characterize successful defensive operations.

PREPARATION

8-8. The defense has inherent strengths. The defender arrives in the area of operations (AO) before the attacker and uses the available time to prepare. Defenders study the ground and select positions that allow massing fires on likely approaches. They combine natural and manmade obstacles to canalize attacking forces into engagement areas. Defending forces coordinate and rehearse actions on the ground, gaining intimate familiarity with the terrain. They place security and reconnaissance forces throughout the AO. These preparations multiply the effectiveness of the defense. Preparation ends only when defenders retrograde or begin to fight. Until then, preparations are continuous. Preparations in depth continue, even as the close fight begins.

SECURITY

8-9. Commanders secure their forces principally through security operations, force protection, and IO. Security operations help deceive the enemy as to

friendly locations, strengths, and weaknesses. They also inhibit or defeat enemy reconnaissance operations. These measures provide early warning and disrupt enemy attacks early and continuously. Force protection efforts preserve combat power. Offensive IO inaccurately portray friendly forces and mislead enemy commanders through military deception, operations security, and electronic warfare. These measures contribute to the defender's security.

DISRUPTION

8-10. Defenders disrupt attackers' tempo and synchronization with actions designed to prevent them from massing combat power. Disruptive actions attempt to unhinge the enemy's preparations and, ultimately, his attacks. Methods include defeating or misdirecting enemy reconnaissance forces, breaking up his formations, isolating his units, and attacking or disrupting his systems. Defenders never allow attackers to fully prepare. They use spoiling attacks before enemies can focus combat power, and counterattack before they can consolidate any gains. Defenders target offensive IO against enemy C2 systems and constantly disrupt enemy forces in depth.

MASSING EFFECTS

8-11. Defenders seek to mass the effects of overwhelming combat power where they choose and shift it to support the decisive operation. To obtain an advantage at decisive points, defenders economize and accept risk in some areas; retain and, when necessary, reconstitute a reserve; and maneuver to gain local superiority at the point of decision. Defenders may surrender some ground to gain time to concentrate forces.

8-12. Commanders accept risk in some areas to mass effects elsewhere. Obstacles, security forces, and fires can assist in reducing risk. Since concentrating forces increases the threat of large losses from weapons of mass destruction (WMD), commanders use deception and concealment to hide force concentrations. They also protect their forces with air and missile defenses.

FLEXIBILITY

8-13. Defensive operations require flexible plans. Planning focuses on preparations in depth, use of reserves, and the ability to shift the main effort. Commanders add flexibility by designating supplementary positions, designing counterattack plans, and preparing to counterattack.

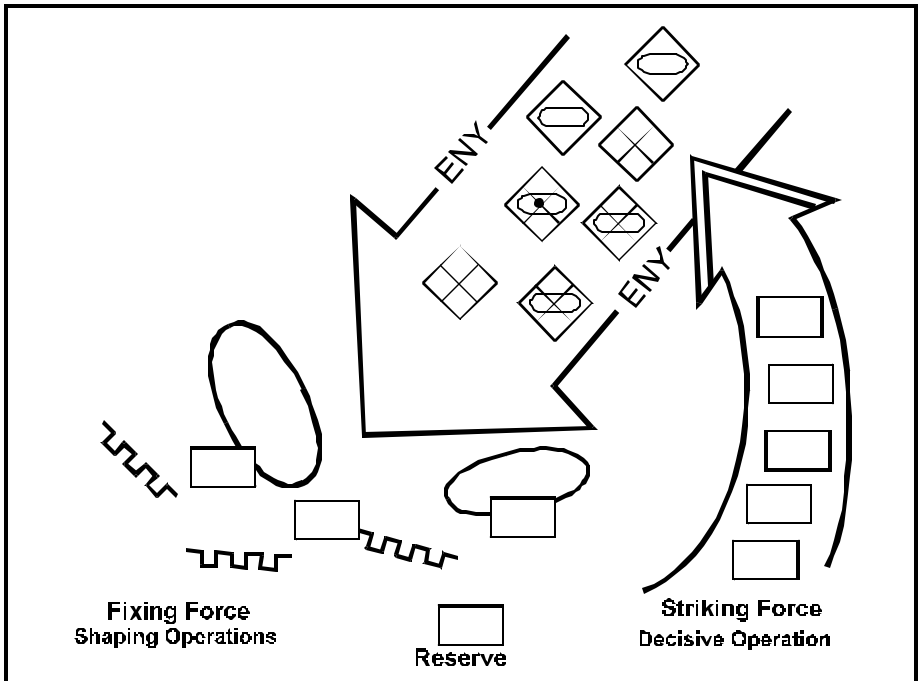
TYPES OF DEFENSIVE OPERATIONS

8-14. The three types of defensive operations are the mobile defense, area defense, and retrograde. All apply at both the tactical and operational levels of war. *Mobile defenses* orient on destroying attacking forces by permitting the enemy to advance into a position that exposes him to counterattack. *Area defenses* orient on retaining terrain; they draw the enemy in an interlocking series of positions and destroy him largely by fires. *Retrogrades* move friendly forces away from the enemy to gain time, preserve forces, place the enemy in unfavorable positions, or avoid combat under undesirable conditions. Defending commanders combine the three types to fit the situation.

8-15. All three types of defense use mobile and static elements. In mobile defenses, static positions help control the depth and breadth of the enemy penetration and retain ground from which to launch counterattacks. In area defenses, commanders closely integrate patrols, security forces and sensors, and reserve forces to cover gaps among defensive positions. They reinforce positions as necessary and counterattack as directed. In retrograde operations, some units conduct area or mobile defenses or security operations to protect other units that execute carefully controlled maneuver or movement rearward. They use static elements to fix, disrupt, turn, or block the attackers. They use mobile elements to strike and destroy the enemy.

MOBILE DEFENSE

8-16. **The *mobile defense* is a type of defensive operation that concentrates on the destruction or defeat of the enemy through a decisive attack by a striking force** (see Figure 8-1). A mobile defense requires defenders to have greater mobility than attackers. Defenders combine offensive, defensive, and delaying actions to lure attackers into positions where they are vulnerable to counterattack. Commanders take advantage of terrain in depth, military deception, obstacles, and mines while employing fires and maneuver to wrest the initiative from the attacker.



The striking force conducts the decisive operation in a mobile defense—a counterattack from an unexpected direction. Minimum combat power is committed to fixing forces that shape the depth of the defense.

Figure 8-1. Mobile Defense

8-17. Commanders commit the minimum force necessary to purely defensive tasks. They place maximum combat power in a striking force that

counterattacks as the enemy maneuvers against friendly positions. Striking forces are considered committed throughout the operation. They have one task: plan, prepare, and execute the decisive operation—the counterattack. Defenders draw attackers into terrain that enables the striking force to counterattack from an unexpected direction. They press the counterattack with overwhelming force and violence.

A *striking force is* a committed force organized to conduct the decisive attack in a mobile defense. It normally comprises the maximum combat power available to the commander at the time of the attack.

8-18. In planning a counterattack, commanders consider enemy options and the likely locations of possible follow-on forces. Commanders decide where to position the striking force, what routes and avenues of approach to use, what fire support is necessary, and what interdiction or attack on follow-on forces will isolate the enemy. They combine military deception and security operations to render enemy reconnaissance ineffective.

8-19. In addition to the striking force, commanders designate a reserve, if forces are available. Reserves are uncommitted forces and may execute numerous missions. They give the commander flexibility. Reserves support fixing forces, ensuring that the defense establishes conditions for success of the counterattack. If the reserve is available after the commander commits the striking force, it exploits the success of the striking force.

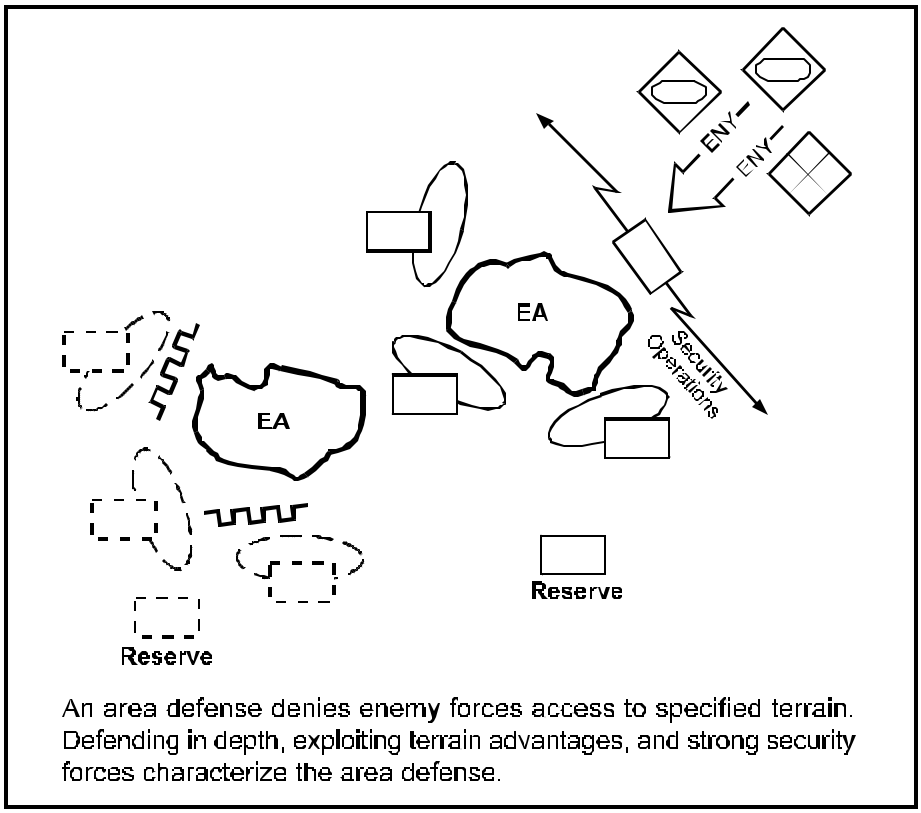
AREA DEFENSE

8-20. **The *area defense* is a type of defensive operation that concentrates on denying enemy forces access to designated terrain for a specific time rather than destroying the enemy outright** (see Figure 8-2, page 8-6). The bulk of defending forces combine static defensive positions, engagement areas, and small, mobile reserves to retain ground. Keys to successful area defenses include effective and flexible control, synchronization, and distribution of fires. Area defenses employ security forces on likely enemy avenues of approach. Commanders employ a reserve with priority to the counterattack. Other potential reserve missions include blocking enemy penetrations and reinforcing other portions of the defense. Area defenses can also be part of a larger mobile defense.

8-21. Area defenses vary in depth, design, and purpose according to the situation. Commanders deny or retain key terrain if the friendly situation gives no other option or friendly forces are outnumbered. Lower-echelon tactical units may position their forces in battle positions on suitable terrain. On occasion, commanders may use a strong point to deny key terrain to the enemy and force his movement in a different direction. Constructing a strong point requires considerable time and engineer support.

RETROGRADE

8-22. **A *retrograde* is a type of defensive operation that involves organized movement away from the enemy**. The three forms of retrograde operations are withdrawals, delays, and retirements. Commanders use



An area defense denies enemy forces access to specified terrain. Defending in depth, exploiting terrain advantages, and strong security forces characterize the area defense.

Figure 8-2. Area Defense

retrogrades as part of a larger scheme of maneuver to create conditions to regain the initiative and defeat the enemy. Retrogrades improve the current situation or prevent a worse situation from occurring. Operational-level commanders may execute retrogrades to shorten lines of communications (LOCs).

Withdrawal

8-23. A *withdrawal,* a form of retrograde, is a planned operation in which a force in contact disengages from an enemy force. Withdrawals may involve all or part of a committed force. Commanders conduct withdrawals to preserve the force, release it for a new mission, avoid combat under undesirable conditions, or reposition forces. Enemy pressure may or may not be present during withdrawals. At tactical echelons, withdrawing forces may be unassisted or assisted by another friendly force.

8-24. In a corps or division withdrawal, commanders organize a security force and a main body. The security force prevents the enemy from interfering with the withdrawal. The main body forms behind the security force and moves away from the enemy; the security force remains between the enemy and the main body and conceals main body preparations and movement. If the withdrawal begins without being detected, the security force may remain in position to prolong the concealment. After the main body withdraws a safe distance, the security force moves to intermediate or final positions. If the enemy detects the withdrawal and attacks, the security force delays to allow the main body to

withdraw. Main body units may reinforce the security force if necessary. They will themselves delay or defend if the security force fails to slow the enemy.

8-25. Commanders plan for and employ air and ground reserves, indirect and missile counterfire, and air defenses. Corps and division reserves remain near main body units to assist withdrawing units by fire and maneuver, if needed. Corps and division reserves may execute spoiling attacks to disorganize and delay the enemy or to extricate encircled or decisively engaged forces.

8-26. Commanders use IO and security operations when withdrawing to deny the enemy information and present false information. They avoid moving forces prematurely or revealing other actions that could signal their withdrawal plans. For example, relocating combat support (CS) and CSS facilities, emplacing obstacles, and destroying routes may signal a withdrawal. To seize the initiative, commanders direct offensive IO that include measures to conceal withdrawal preparations.

8-27. Commanders dedicate resources and plan for future operations when withdrawing. The ability to conduct a timely withdrawal is especially dependent upon sufficient transport. CSS planners assist in developing courses of action and adjust sustaining operations to conform to the commander's decisions. A withdrawal ends when the force breaks contact and transitions to another operation. Forces may withdraw into a defended area and join its defense, withdraw into a secure area and prepare for future operations, or continue away from the enemy in a retirement.

Delay

8-28. A *delay* is a form of retrograde in which a force under pressure trades space for time by slowing the enemy's momentum and inflicting maximum damage on the enemy without, in principle, becoming decisively engaged. Delays gain time for friendly forces to—

- Establish defenses.
- Cover defending or withdrawing units.
- Protect friendly unit flanks.
- Contribute to economy of force.
- Draw the enemy into unfavorable positions.
- Determine the enemy main effort.

8-29. Commanders direct delays when their forces are insufficient to attack or conduct an area or mobile defense. A delay is also appropriate as a shaping operation to draw the enemy into an area for subsequent counterattack. Commanders specify the critical parameters of the delay:

- Its duration.
- Terrain to retain or deny.
- The nature of subsequent operations.

8-30. Delays can involve units as large as a corps and may be part of a general withdrawal. Divisions may conduct delays as part of a corps defense or withdrawal. In a delay, units may fight from a single set of positions or delay using alternate or successive positions. A delay ends when—

- Enemy forces halt their attack. Friendly forces can then maintain contact, withdraw, or counterattack.
- Friendly forces transition to the defense.
- The delaying force completes its mission and passes through another force or breaks contact.
- The friendly force counterattacks and transitions to the offense.

8-31. Delaying units should be at least as mobile as attackers. Commanders take measures to increase friendly mobility and decrease enemy mobility. Open, unobstructed terrain that provides friendly force mobility requires major engineering efforts to hinder enemy mobility. Close or broken terrain slows the enemy but also makes it more difficult to maintain contact and may hinder friendly movement.

Retirement

8-32. A retirement is a form of retrograde in which a force not in contact with the enemy moves away from the enemy. Typically, forces move away from the enemy by executing a tactical road march. Retiring units organize to fight but do so only in self-defense. Retirements are usually not as risky as delays and withdrawals.

Risk in Retrograde

8-33. Retrogrades require firm control and risk management. They increase psychological stress among soldiers, who may see movement away from the enemy as a sign of defeat. Unless held in check, such concerns can lead to panic and a rout. Successful retrogrades require strong leadership, thorough planning, effective organization, and disciplined execution. Friendly troops move swiftly but deliberately. A disorganized retrograde in the presence of a strong enemy invites disaster. Commanders manage risk during retrogrades with these measures:

- Avoiding decisive engagement. Reserves and massed indirect and joint fires can assist in accomplishing this.
- Preparing plans to enhance rapid, controlled execution.
- Denying the enemy information on unit movement.
- Avoiding surprise with continuously updated intelligence.
- Combining deception and delaying actions to prevent the enemy from closing in strength.

DEFENSIVE OPERATIONS WITHIN THE OPERATIONAL FRAMEWORK

8-34. Commanders use the operational framework (AO, battlespace, and battlefield organization) to conduct defensive operations (see Figure 8-3). Commanders base their framework on METT-TC and an understanding of their battlespace. They conduct simultaneous and sequential decisive, shaping, and sustaining operations in depth by synchronizing their forces in time, space, resources, purpose, and action. Commanders may designate deep, close, and rear areas when conducting operations that are generally linear and contiguous.

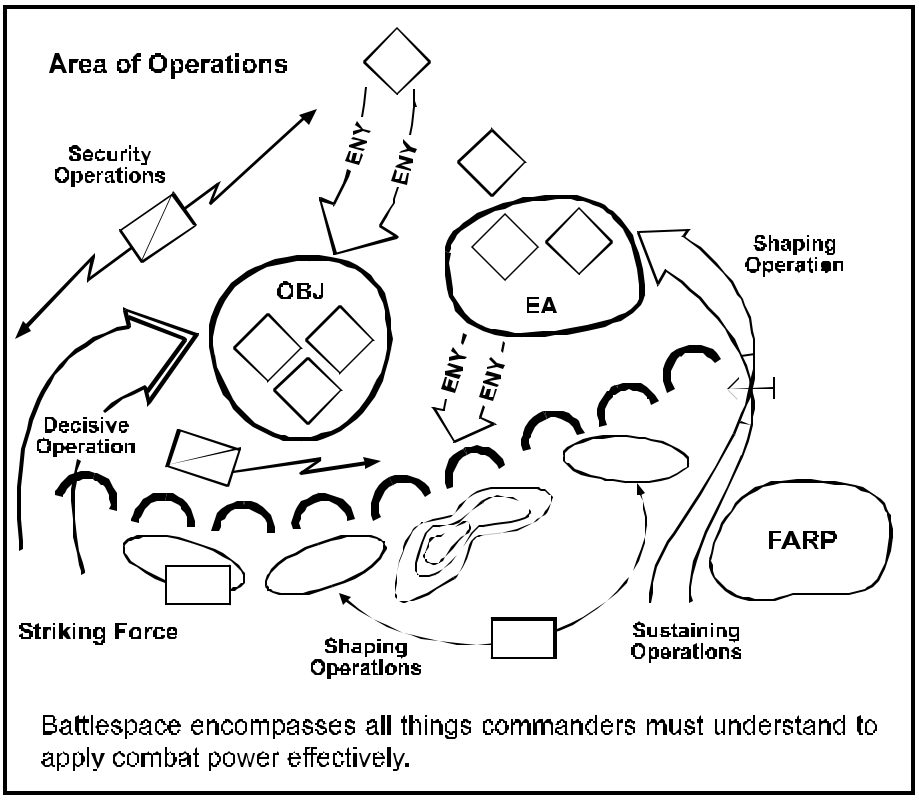


Figure 8-3. Operational Framework in the Defense

8-35. Commanders deny enemy forces freedom of movement within the gaps formed by extended, noncontiguous AOs. They dominate their entire AO throughout the operation, assigning responsibility for unoccupied ground and allocating combat power. When commanders designate subordinate unit AOs that are noncontiguous, they retain responsibility for portions of their AO not assigned to subordinates. Regardless of the proximity or separation of its elements, commanders see their defense as a continuous whole. They fight decisive, shaping, and sustaining operations as one action, synchronizing simultaneous operations to accomplish a single purpose: defeating the attack and quickly transitioning to the offense.

DECISIVE OPERATIONS IN THE DEFENSE

8-36. The decisive operation in a defense defeats the enemy attack. In a mobile defense, the counterattack by the striking force is the decisive operation. The more commanders know about the enemy situation, the more they can weight the counterattack. In area defenses, defeating the enemy attack within engagement areas is the decisive operation. Commanders draw the enemy into engagement areas, where defenders destroy them using massed fires, obstacles, and other assets.

8-37. Throughout the execution of mobile and area defenses, commanders designate a main effort and synchronize the battlefield operating systems (BOS) to support it. If necessary, they shift their main effort to concentrate forces and mass effects. Defending commanders may shift their main effort repeatedly to

defeat an attack. If they correctly anticipate enemy actions, commanders can execute their plan for the decisive operation despite shifting the main effort. They always designate the decisive operation as the main effort at the decisive point.

8-38. Reserves preserve commanders' flexibility and provide a hedge against uncertainty. Once, the reserve is committed, its operation becomes the main effort. If commanders commit their reserve, they should immediately designate another from uncommitted forces or forces in less threatened areas. Commanders may employ reserves throughout the operation. Typical reserve missions include counterattacking, reinforcing, blocking, and destroying a penetration. Commanders avoid assigning tasks to the reserve other than those required to support planning and preparing for their be-prepared missions. Reserves are best used to reinforce and expedite victory rather than prevent defeat. The concept of operations determines the reserve's primary mission. Unless otherwise delegated, the commander designating the reserve retains authority for its commitment.

Decisive Defensive Operations ¾ Pusan, Korea

By the end of August 1950, the North Korean People's Army (NKPA) occupied most of the Republic of Korea (ROK), less the Pusan pocket on the southeast portion of the peninsula. President Kim Il Sung was amazed at the speed with which the NKPA had moved south, and he assembled 98,000 more troops to crush the Eighth Army. Precariously held, the Pusan pocket contained about 120,000 US and ROK soldiers. The operation became hundreds of large and small engagements marked by thousands of casualties.

The NKPA struck at numerous points along the perimeter, expending men and resources in an effort to create a penetration. But the line held and fresh United Nations (UN) forces arrived to bolster the defense. Sensing that an opportunity was slipping away, the NKPA attacked with increased intensity on 31 August 1950. Despite tremendous punishment by UN air force bombing and strafing, the North Koreans breached the defensive lines in several areas. The 24th Infantry Division counterattacked, while the 1st Cavalry Division and the 1st ROK Division held at Taegu. Two enemy divisions struck the 25th Infantry Division in a bloody fight that saw Sobuk Ridge change hands 13 times in less than a month. The line held despite US units giving ground or fighting in isolation. While the NKPA made impressive gains along the perimeter, the defense held and the ports remained open.

The defense of the Pusan perimeter proved decisive in that it broke the North Korean will to continue the attack and fixed remaining enemy forces. Further north, US forces executed Operation Chromite at Inchon, a turning movement that trapped the NKPA, threatened it with imminent destruction, and allowed UN forces in the Pusan pocket to break out and resume offensive operations.

SHAPING OPERATIONS IN THE DEFENSE

8-39. Shaping operations executed simultaneously throughout the AO support the conduct of the defender's decisive operation by upsetting the attacker's design. They selectively suppress or neutralize the enemy's BOS and disrupt his synchronization. IO shape enemy perceptions and can influence the decision to attack. Fires contribute to shaping operations by attacking high-payoff targets and create conditions for successful decisive operations. Shaping operations in the defense include—

- Countermobility and mobility operations.
- Reconnaissance and security operations.
- Aerial-delivered and long-range precision indirect fires.
- Passages of lines (forward and rearward).
- Actions of fixing forces that shape to support the decisive operation.
- Movements of units that directly facilitate other shaping operations and the decisive operation.
- Actions by reserve forces before their commitment.

8-40. Security forces perform critical functions in the defense. They secure gaps between defending units, protect the force from surprise, meet the leading enemy forces, strip away reconnaissance and security elements, report enemy strengths and locations, and help identify the enemy decisive operation. They harass and slow attacking forces to gain time and space for shaping enemy actions and protecting LOCs, headquarters, fire support units, and reserves.

Shaping Defensive Operations ¾ 2d SANG Brigade at Khafji

Defensive operations often have significant political implications. During the evening of 29 January 1991, the Iraqi 5th Mechanized Division launched several large probes across the Saudi Arabian border. Elements of the 2d Saudi Arabian National Guard (SANG) Brigade—a force accompanied by American advisors and a Marine air/naval gunfire liaison company—met them at the town of Khafji, Saudi Arabia. The Iraqis seized the town, cutting off two Marine reconnaissance teams, who evaded capture while continuing to call in air and field artillery support. The next day, the 2d SANG Brigade attempted to retake Khafji without success. However, on 31 January, the brigade attacked again, and by 1 February succeeded in clearing Iraqi resistance.

This relatively small tactical action was important because it convinced the theater commander that the Iraqis could not conduct complex operations and were vulnerable to air interdiction. This information helped to shape future coalition operations. The action, by demonstrating that the Saudi forces would fight aggressively, strengthened the coalition and bolstered its will. Lastly, the operation demonstrated that US and coalition forces could conduct successful multinational operations, a discovery with strategic implications.

SUSTAINING OPERATIONS IN THE DEFENSE

8-41. Sustaining operations in the defense occur throughout the AO. Commanders ensure freedom of action and continuity of the defense by conducting CSS operations, rear area and base security, LOC maintenance, movement control, and terrain management.

8-42. Security for sustaining operations is a primary concern. Commanders organize forces and terrain to protect sustaining operations and retain freedom of action. Commanders group forces performing sustaining operations into bases and base clusters for protection and security. Base and base clusters organize for self-defense. Commanders designate response forces and tactical combat forces (TCFs) to augment base cluster self-defense capabilities (see FM 3-90; FM 3-100.7).

8-43. Force projection operations present distinct security challenges for sustaining operations. To protect combat power buildup, combat, CS, and CSS forces operate in the same area while establishing the initial lodgment. Forces conducting sustaining operations take increased active and passive self-protection measures until combat forces are available. Commanders assess threat capabilities, decide where and when to accept risk, and assign units to protect and sustain the force.

CONSIDERATIONS FOR NONLINEAR DEFENSIVE OPERATIONS

8-44. Commanders may conduct nonlinear defensive operations in contiguous and noncontiguous AOs. In both cases, defenders focus on destroying enemy forces, even if it means losing physical contact with other friendly units. Successful nonlinear defenses require all friendly commanders to understand the higher commander's intent and share a current common operational picture (COP). They also favor use of a battlefield organization based on decisive, shaping, and sustaining operations rather than deep, close, and rear areas. Noncontiguous defenses are generally mobile defenses; however, some subordinate units may conduct area defenses to hold key terrain or canalize attackers into engagement areas. Even mobile defenses that begin as linear operations often evolve into nonlinear operations. Area defenses are typically more linear operations because of their orientation on terrain.

8-45. Nonlinear defenses place a premium on reconnaissance and surveillance to maintain contact with the enemy, produce relevant information, and develop and maintain a COP. The defending force focuses almost exclusively on defeating the enemy force in depth rather than retaining large areas due to the size of the AO. All forces conducting nonlinear defenses require robust communications and sustainment capabilities. Noncombatants and the fluidity of nonlinear defensive operations require commanders to exercise judgement in clearing fires, both direct and indirect.

CONDUCTING DEFENSIVE OPERATIONS

8-46. Before deciding how to defend, commanders assess the situation and begin to plan. A simple concept of operations flexible enough to meet the enemy wherever he chooses to attack is essential for success in the defense. Operational-level defenses combine all three types of defensive actions. If defense of a specified area is not required, commanders may draw the enemy deep into

their AO and strike his flanks and rear. They use spoiling attacks if conditions favor them.

PLANNING FOR DEFENSIVE OPERATIONS

8-47. In planning a defense, operational commanders identify their own and the enemy's centers of gravity and related decisive points. They also identify the likely way the enemy will attack. Commanders estimate where the enemy will conduct his decisive operation and how to defeat it while maintaining the coherence of the defense. Operational commanders allocate resources and assign AOs to subordinate tactical units. They decide where and when to defend and generally match friendly strength to enemy strength.

8-48. Commanders consider the factors of METT-TC as they plan their defense. They choose defensive positions that force the enemy to make costly attacks or conduct time-consuming maneuvers to avoid them. Commanders plan IO to gain information superiority. Information superiority allows commanders to hide their intentions and deceive the enemy, while degrading the enemy's ability to synchronize his attack. Commanders plan defensive and counteroffensive operations in depth of time, space, and purpose.

Mission

8-49. The mission flows from the higher headquarters concept of operations. Commanders must understand how their defensive operation contributes to the success of the higher headquarters operation. The nature of the AO and subsequent missions affect the missions commanders assign to subordinates.

Enemy

8-50. Commanders and staffs estimate enemy offensive capabilities, vulnerabilities, and operational design. At tactical levels, commanders estimate enemy strengths, weaknesses, and intent. They infer potential enemy courses of action and focus their estimates on the most dangerous and most likely of them. Commanders and units respect, but are not paralyzed by, enemy capabilities. Defending commanders view themselves and their AOs through the enemy commander's eyes and anticipate how he might attempt to seize terrain or destroy friendly forces.

8-51. Defending commanders conduct a thorough intelligence preparation of the battlefield (IPB) as part of their visualization. IPB enables commanders and staffs to anticipate the enemy's objectives and courses of action and helps determine what control measures to use. In particular, planners anticipate enemy use of indirect approaches and capability to attack friendly C2 and sustaining operations.

8-52. Commanders use every resource available to offset attackers' numerical advantages, identify threats, and mass combat power against their vulnerabilities. Victory requires accurate and timely in-depth targeting of enemy units, facilities, and systems. Real-time fusion of information among C2, ISR, fire support, engineer, aviation, and CSS elements helps commanders do this. A successful defense compels enemies to commit to a course of action before they want to and creates opportunities for friendly forces.

Terrain and Weather

8-53. Defenders analyze the terrain to decide where they can best kill the enemy. Defending large AOs requires commanders to take risks and accept gaps. Smaller AOs may restrict maneuver and limit flexibility. Subordinate unit AOs should extend far enough toward the enemy to give commanders time to assess enemy capabilities and intentions, visualize the operation, decide on a course of action, and execute it. Operational-level commanders consider large-scale geographic features and choose the best terrain for defending based on their mission. The geography should hinder operational mobility of large enemy formations and provide advantages for the operational defense. A defense lacks value if the enemy can readily bypass it, unless the defensive focus is to retain that terrain. Commanders also consider friendly LOCs. Geography determines LOC capacity and the size force LOCs can support. Operational commanders commit significant resources to improve LOCs and friendly mobility, and to degrade enemy operational mobility.

8-54. The commander's personal reconnaissance is essential. Tactical commanders focus on identifying probable enemy assembly areas, CSS dispositions, field artillery locations, and ground favoring an attack. They also determine the area most advantageous for the enemy decisive operation. Terrain characteristics may determine the shape of the defense. Tactical commanders seek positions that offer effective cover and concealment. The defending force exploits any aspect of terrain that can slow enemy momentum or make it difficult for the enemy to mass effects or conduct maneuver.

8-55. Defenders seek to engage attackers at points where the terrain places them at the greatest disadvantage. Defending commanders use manmade obstacles to improve natural obstacles; to fix, disrupt, turn, or block enemy movement; and to protect friendly positions and maneuver. Some terrain may be so significant to the defense that its loss would prove decisive. In such cases, commanders focus their plan on retaining it.

8-56. Weather and visibility affect how defenders use terrain. Commanders plan for the effects of adverse or limited visibility on weapons systems and optical and thermal devices. A plan that succeeds in clear conditions may be less effective during bad weather. Branches to the basic plan should address necessary modifications to the defense during periods of reduced visibility. Commanders and staffs need local tactical weather information as well as the more general theater-level forecasts.

Troops and Support Available

8-57. As they visualize the operation, commanders consider the capabilities of their force, teamwork, state of training, and leader experience. The firepower, mobility, protection, health, morale, and training of troops determine, to some extent, how they defend. Differences in unit tables of organization and equipment, mobility, training, and leadership make some units more suitable for some missions than for others. In multinational operations, for example, particular defensive arrangements may be necessary to accommodate national pride or interests. Defenders exploit relative strengths in tactics and capabilities that give defenders advantages over the attackers. These may include air

assault and attack helicopter capabilities, night combat experience, long-range precision fires, intelligence, and battle command.

Time Available

8-58. The time available to prepare is a crucial factor. The defense is more effective when time is available to plan decisive, shaping, and sustaining operations; conduct reconnaissance and deliberately occupy positions; fortify the ground, plan fires, and install obstacles; coordinate maneuver, fires, and CSS; and rehearse. Commanders at all echelons manage their resources to prepare the best defense time allows. They establish priorities of support that focus work on the unit designated to conduct the decisive operation. They set priorities to focus units on the most important tasks.

8-59. Small units train to defend with minimal preparation when necessary; however, strong defenses take time to organize and prepare. To gain time for the main body to organize the defense, commanders may order a delay by a covering force or a spoiling attack by ground or air units. Lack of time and uncertainty about factors such as the enemy order of battle, main effort, and objectives may compel commanders to designate a larger reserve or accept greater risk. It may also determine the type of defense to be employed.

Civil Considerations

8-60. International law and moral imperatives require Army forces to consider the effects of operations on civilian populations. The defense of national boundaries may require operational commanders to defend in less depth than they would like. The presence of culturally, economically, and politically significant assets may limit the range of options. Countermobility operations directed at economically important roads, railways, and bridges might be prohibited. When Army forces must damage areas that are important to civilians, they ensure that civilian leaders and populations understand why these actions are necessary.

8-61. AOs with large civilian populations often require a portion of the force to conduct support operations. Units may expend significant resources to evacuate endangered populations. Commanders implement restrictive fire support coordinating measures to protect civilian facilities and areas, consistent with rules of engagement (see FM 3-09). Army forces must consider civilian movements when emplacing minefields.

PREPARING FOR DEFENSIVE OPERATIONS

8-62. Defensive preparations begin as early as possible and continue throughout the operation. Parallel planning facilitates simultaneous preparation at all command levels. As staffs prepare plans, leaders conduct a personal reconnaissance. There is no substitute for actually seeing and walking the defensive area. Commanders at all echelons integrate adjustments resulting from preparation activities. All echelons refine their plans in parallel.

8-63. A thorough rehearsal contributes to effective execution. At tactical levels, rehearsals usually take place on prominent terrain overlooking the defensive area, with a terrain model or a map. At the operational level, they involve simulations and command post exercises. Such rehearsals preceded Operations

Just Cause, Desert Shield, and Uphold Democracy. Joint exercises are often operational-level rehearsals. Rehearsals allow subordinate commanders and staffs to review what they are required to do and when. They aid mutual understanding and promote synchronized actions. Rehearsals permit adjustments to the plan and refinement of responsibilities for actions and contingencies at critical points in the operation.

8-64. The most important preparation activities include—

- Conducting rehearsals.
- Developing engagement areas.
- Executing shaping IO, including military deception operations.
- Taking force protection measures, to include strengthening air and missile defenses of critical assets.
- Executing security operations.
- Conducting reconnaissance and surveillance missions to collect information on the enemy and AO.
- Preparing reserves.
- Designating counterattack forces.
- Organizing the force for movement and support.
- Positioning forces in depth.
- Improving terrain to favor the defender.

EXECUTING DEFENSIVE OPERATIONS

8-65. Commanders consider several factors as they exercise battle command during defensive operations. Army forces conduct operations in depth; commanders consider how best to employ their force throughout the AO. Defending in depth may result in enemy penetrations or parts of the force becoming encircled; commanders visualize how to deal with these situations. Elements of the force conduct sustaining operations throughout the AO; commanders make provisions for protecting them. If WMD are present, commanders prepare the force to counter their effects. Finally, commanders visualize how they will use a counterattack to terminate the defense and transition to offensive operations.

Battle Command

8-66. Commanders position themselves at the critical place at the critical time. In the defense, this may include moving with the counterattacking force or locating with the committed reserve. Commanders should anticipate and provide for the means to exercise C2 on the move.

Operations in Depth

8-67. In both area and mobile defenses, commanders direct simultaneous operations in depth to ensure success of the decisive operation. Simultaneous shaping operations throughout the AO limit enemy options, disrupt his synchronization and affect follow-on element arrival times. Reconnaissance, surveillance, security, air elements, and special operations forces all have roles in the defense. As attackers approach, these forces monitor their activities and track committed units. They determine the avenues of approach being used, identify the greatest threat, and gain time for the main body to act.

Enemy Penetrations

8-68. Commanders use all available means to contain or destroy enemy penetrations. In an area defense, commanders block and eliminate penetrations as quickly as possible. In a mobile defense, commanders may allow a significant penetration to position attackers for destruction by the striking force. Commanders shift their main effort to counter enemy actions and create conditions that favor the decisive operation. This may require adjusting boundaries, repeatedly committing and reconstituting reserves, and executing branches to the original plan.

Encirclements and Breakouts

8-69. Units may be unintentionally cut off from friendly forces. In that case, the senior commander among the encircled units assumes control of all encircled elements and assesses the defensive posture of the force. The commander rapidly reorganizes, consolidates, and determines whether the next higher commander wants the force to break out or defend in place. If the force can break out and that action meets the higher commander's intent, it does so before the enemy has time to block escape routes.

8-70. To break out, the commander designates or organizes a force to create a penetration toward other friendly forces while the other encircled units continue defending. When the penetration is created, the defending units break contact and follow the attacking unit to rejoin friendly forces. If the force cannot break out, it continues to defend while the commander coordinates a linkup with a relieving force.

Protecting Sustaining Operations

8-71. Uninterrupted sustaining operations ensure freedom of maneuver and continuity of operations. Threats to sustaining operations may require forces and facilities to reposition. Response forces from CSS and CS units are responsible for countering threats from small tactical units. When response forces are insufficient, commanders may commit a TCF (see FM 3-90; FM 3-100.7). Because threats to sustaining operations can divert combat power from the decisive operation, commanders carefully weigh the need for such diversions against the possible consequences and decide where to accept risk.

Weapons of Mass Destruction

8-72. When present in the theater of operations, WMD present a major threat. These weapons can completely destroy the strongest defensive positions as well as obstruct maneuver. In situations where WMD may be used, commanders take both offensive and defensive actions. They attack enemy WMD C2, delivery systems, and storage areas. They protect the force through dispersion, theater missile defense, survivability positions, and individual protective measures. Commanders also adjust their operations and tactics. They fight from dispersed locations and concentrate their forces only as needed to mass the effects of fires.

Counterattacks

8-73. Counterattacks seek to wrest the initiative from the attacker. Timing is critical. Executed too soon, a counterattack may expend resources needed later for a more urgent contingency. Executed too late, it may be ineffective.

8-74. Commanders anticipate circumstances that favor counterattacks and establish information requirements that help them determine when those circumstances occur. To make these decisions wisely, commanders require relevant information about both friendly and enemy forces. Errors in computing movement and deployment times can upset the timing of the counterattack. Late or inaccurate reports about attackers can lead to executing too soon or too late. Training and experience, combined with effective information management, give commanders the relevant information needed to make the right decisions.

Terminating the Defense

8-75. Attackers culminate through friction caused by their own maneuvers, losses, errors, exhaustion, skillful friendly defenses, and other factors. At that point, the initiative passes to the defender. Commanders then designate a counterattack as the decisive operation, finish destroying the enemy force, and transition to the offense.

THE IMPACT OF TECHNOLOGY

8-76. Improved technology provides commanders increased flexibility for defensive operations. The fusion of information from C2, ISR, fire support, and CSS systems—combined with the commander's judgment—allows commanders to understand their battlespace and conduct fluid noncontiguous operations from widely dispersed locations. A COP based on this fused information helps commanders make better and quicker decisions. The increasing range and precision of direct and indirect fires allow Army forces to weaken attackers and shape the situation before entering close combat. Improved C2 and ISR systems allow commanders to disperse their forces without losing the ability to mass effects at the decisive time and place. Dispersed Army forces present tactical challenges to attackers. If attackers disperse their forces, they expose themselves to swift concentration of more mobile friendly forces. If attackers concentrate against a portion of the friendly force, the remaining friendly units maneuver in depth to isolate the enemy force and destroy it. Modern technology provides the means to conduct more flexible and deadly defensive operations than ever before. Trained soldiers and decisive leaders apply those means in uncertain situations to defeat enemies and transition to offensive operations that achieve the desired end state.

commanders synchronize and target information as intensely as they do fires and maneuver. They seek to make better use of their information and information systems than adversaries or enemies do of theirs. These information systems include the analysis, procedures, and training necessary to extract and exploit intelligence and other critical information from raw data, and present it in a form in which it can be quickly understood. Successful commanders are those who see, understand, and then exploit the situation.

CHARACTERISTICS OF INFORMATION SUPERIORITY

11-3. Gaining and exploiting information superiority demands effective doctrine, training, leadership, organization, materiel, and soldiers. It puts a premium on the commander's ability to visualize, describe, and direct operations. Effective use of advanced information systems, procedures, and training allows commanders to achieve and maintain situational understanding. Modern information technologies help commanders lead more effectively and consistently make better decisions than those opposing them.

11-4. Commanders manage their information resources, combine their judgment with the knowledge of their staffs and subordinates, and use information systems to understand their battlespace better than their adversaries or enemies do. Commanders require relevant information about the factors of METT-TC to exercise effective command and control (C2). From the initial warning order to completion of redeployment, Army forces use every means, including force, to acquire that information. At the same time, they attempt to deny adversaries and enemies information about friendly forces and actively degrade their ability to collect, process, store, display, and disseminate information. Effective friendly use of information, complemented with active measures that prevent enemies from using information effectively or countering friendly information use, creates conditions for achieving information superiority. Army forces use the qualitative advantages of information superiority as a springboard for decisive operations.

11-5. The operational and tactical implications of information superiority are profound. Rapid seizure and retention of the initiative becomes the distinguishing characteristic of all operations. Information superiority allows commanders to make better decisions more quickly than their enemies and adversaries. Unable to keep pace, enemies and adversaries must deal with new problems before they can solve current ones. In combat, a rapid tempo—sustained by information superiority—can outpace enemy's ability to make decisions contribute to his destruction. In stability operations and support operations, information superiority helps deploying forces anticipate problems and requirements. It allows commanders to control events and situations earlier and with less force, creating the conditions necessary to achieve the end state.

11-6. Adversaries and enemies pursue their own relative information advantages, very likely in asymmetric ways, while continually attempting to deny information superiority to friendly forces. Because opposing forces constantly adapt and situations continually evolve, information superiority is relative and transitory. Absolute information superiority is not possible. Commanders

assess the quality of their information against their decision making requirements. Against that assessment, they estimate the quality of the enemy's operational picture. Commanders avoid any complacency associated with relative levels of military technology. They are aware that their enemy may, by chance or countermeasures, uncover the sources of friendly informational advantage, block them, or use them to deceive.

11-7. Commanders recognize that unless they envision and direct operations designed to achieve and maintain information superiority, they may lose it. Commanders exploit any advantages in information capability and intelligence to increase the effects of combat power. They constantly seek to improve their situational understanding and to assess that of their enemy. They know that losing information superiority may result in losing the initiative.

> *Nations do not go to war because they think war is safe. They go to war because they think they will win.*
>
> Richard M. Swain
> *Lucky War*

THE INFORMATION ENVIRONMENT

11-8. The information environment is the aggregate of individuals, organizations, or systems that collect, process, or disseminate information; also included is the information itself. The climate, terrain, and weapons effects (such as electromagnetic pulse or blackout) affect the information environment but are not part of it. The information environment includes the C2 systems of friendly and enemy forces and those of other organizations and groups. Commanders consider the explosive growth of information and the pervasive nature of the information environment when they visualize an operation. They include that part of the information environment that affects their operation in their battlespace.

11-9. Most of the information environment is not under military control, adding to the challenges commanders face. While they cannot control the entire information environment, they must be prepared to operate within it. Interaction with the information environment increases the complexity of Army operations. More than ever, commanders consider how factors outside their area of operations (AO) may affect their operations. IO often requires coordination with governmental and nongovernmental agencies. Legal limitations on IO vary according to the situation. This interaction may affect the impact of tactics on operations and strategy. Military actions that are tactically or operationally insignificant may influence strategy, or even national policy, when highlighted by the media. Therefore, operational commanders consider more than the military conditions of the end state of a campaign. They consider the comprehensive diplomatic, political, and social aspects of it as well.

11-10. Army forces increasingly rely on the unrestricted use of the information environment. Commanders and staffs need to understand its effects on operations and develop C2 systems that support their operational needs and intelligence requirements. Distance has little meaning in the information environment. Army information systems are “in contact” with enemy information systems before any operation starts. They remain in contact after the

operation ends. Commanders understand that there is no sanctuary for friendly information. Before Army forces arrive in theater, the battle for information superiority begins. Commanders and staff conduct operations accordingly.

Information Superiority in the Gulf

In the opinion of many observers, the Gulf War emphasized integrating information systems, operations, and management in ways that heralded a new form of warfare. Air operations struck C2 nodes throughout Iraq and occupied Kuwait, disabling the air defense network and slowing operational and tactical response. Until the air operation started, Third Army restricted preparations to areas well south of the border. Under cover of intense air bombardment, Saudi and French units secured areas along the border while the powerful US forces shifted west. Even as the Third Army's VII and XVIII Corps moved into attack positions, the US Central Command conducted military deception operations at sea and on land, culminating with the feint by 1st Cavalry Division in the Wadi al-Batin area.

As the ground offensive neared, tactical reconnaissance and surveillance confirmed that the Iraqi Army had its right flank exposed to the west of Kuwait. Special Operations Forces and tactical air reconnaissance complemented these efforts. By 23 February 1991, both corps had secured the border area and extended ground and air reconnaissance well inside Iraq. Intense air attacks fixed and decimated the Iraqi army. The Marine deception and 1st Cavalry Division feint continued to draw Iraqi attention eastward. Third Army moved to attack positions west of the Wadi al-Batin to exploit the Iraqi mistake. At 0400 hours on 24 February 1991, coalition ground forces struck into Kuwait and Iraq. They ended their offensive four days later, having decisively defeated the once fourth-largest army in the world.

Speaking after the war, LTG S. Bogdanov, Chief of the General Staff Center for Operational and Strategic Studies of the former Soviet Union, stated, "Iraq lost the war before it even began. This was a war of intelligence, electronic warfare, command and control, and counterintelligence. Iraqi troops were blinded and deafened…."

CONTRIBUTORS TO INFORMATION SUPERIORITY

11-11. Commanders direct three interdependent contributors to achieve information superiority (see Figure 11-1, page 11-6):

- Intelligence, surveillance, and reconnaissance (ISR).
- Information management (IM).
- IO (to include related activities).

These contributors enable and complement full spectrum operations. Specific objectives that contribute to information superiority include the following:

- Develop and maintain a comprehensive picture of enemies and adversaries; forecast their likely actions.
- Deny enemies and adversaries information about friendly forces and operations.

- Influence enemy and adversary leader perceptions, plans, actions, and will to oppose friendly forces.
- Influence noncombatants and neutrals to support friendly missions or not to resist friendly activities.
- Inform noncombatant and neutral organizations so they can better support friendly policies, activities, and intentions.
- Protect friendly decision making processes, information, and information systems.
- Continually provide relevant information (including intelligence) to the commander and staff in a useable form.
- Destroy, degrade, disrupt, deny, deceive, and exploit enemy decision making processes, information, and information systems, and influence those of adversaries and others.

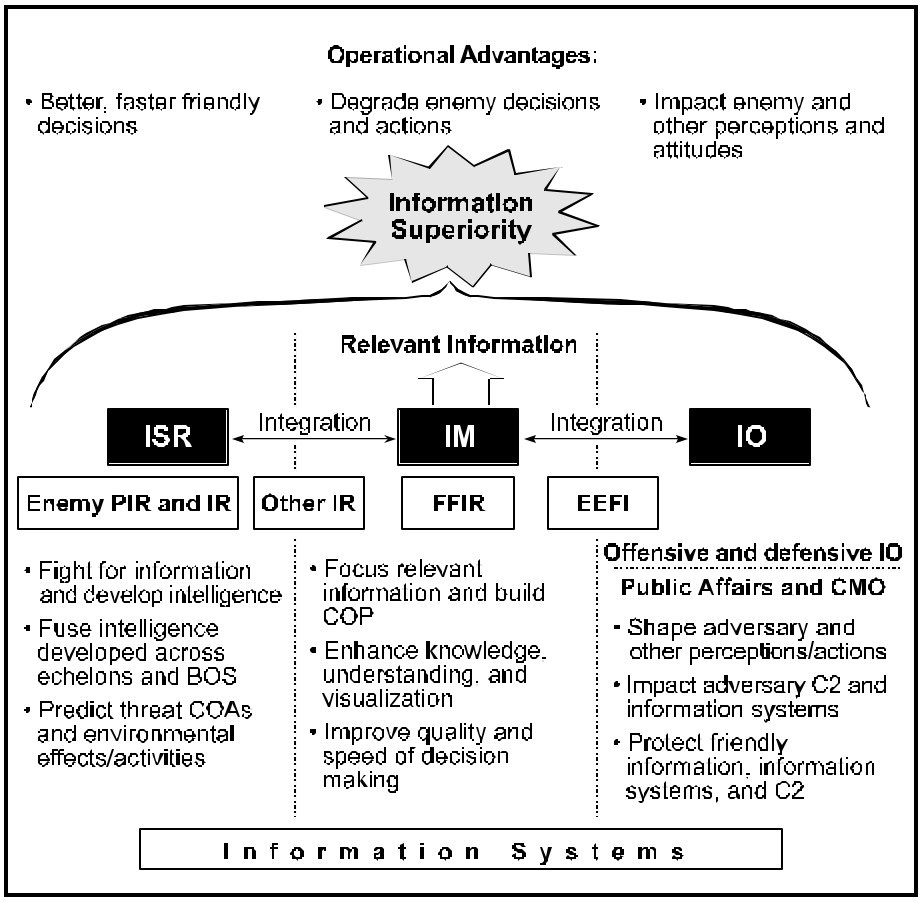

Operational Advantages:
• Better, faster friendly decisions
• Degrade enemy decisions and actions
• Impact enemy and other perceptions and attitudes
Information Superiority
Relevant Information
ISR
Integration
IM
Integration
IO
Enemy PIR and IR
Other IR
FFIR
EEFI
• Fight for information and develop intelligence
• Fuse intelligence developed across echelons and BOS
• Predict threat COAs and environmental effects/activities
• Focus relevant information and build COP
• Enhance knowledge, understanding, and visualization
• Improve quality and speed of decision making
Offensive and defensive IO
Public Affairs and CMO
• Shape adversary and other perceptions/actions
• Impact adversary C2 and information systems
• Protect friendly information, information systems, and C2
Information Systems

Figure 11-1. Information Superiority

11-12. Commanders wage the struggle for information superiority throughout the information environment, not only in the AO. Superiority in one contributor alone does not ensure information superiority. For example, Army forces may have better IM than a less sophisticated enemy. However, superior intelligence and better security may give the enemy commander more information about Army forces than they have about the enemy. Uncoordinated

actions within single contributors are ineffective. Information superiority results when commanders synchronize all three contributors. Figure 11-2 illustrates the nature of the struggle for information superiority.

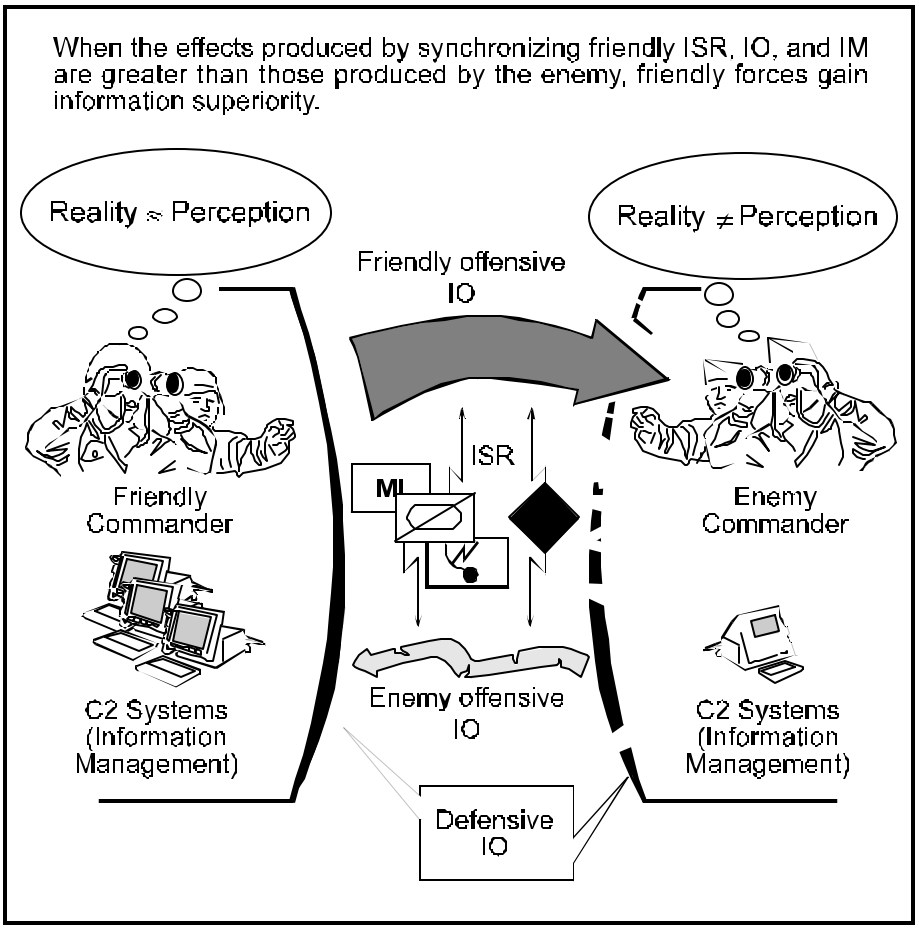

When the effects produced by synchronizing friendly ISR, IO, and IM are greater than those produced by the enemy, friendly forces gain information superiority.
Reality ≈ Perception
Reality ≠ Perception
Friendly offensive IO
ISR
MI
Friendly Commander
Enemy Commander
C2 Systems (Information Management)
Enemy offensive IO
C2 Systems (Information Management)
Defensive IO

Figure 11-2. Information Operations and Information Superiority

INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE

11-13. ISR integration is fundamental to information superiority. Thoroughly integrated ISR operations add many collection sources. ISR integration eliminates unit and functional "stovepipes" for planning, reporting, and processing information and producing intelligence. It provides a common mechanism for all units to conduct ISR operations in a coordinated, synergistic way.

11-14. ISR operations allow units to produce intelligence on the enemy and environment (to include weather, terrain, and civil considerations) necessary to make decisions. This intelligence answers requirements developed throughout the operations process. Timely and accurate intelligence encourages audacity and can facilitate actions that may negate enemy superiority in soldiers and materiel. Normally, timely and accurate intelligence depends on aggressive and continuous reconnaissance and surveillance.

Intelligence

11-15. The complexity of the operational environment requires sharing intelligence from the national level to the tactical level and among headquarters at each level. Analysis is a complex task that requires fusing information and intelligence from each ISR discipline and asset into an all-source product. Analysis is increasingly distributed and collaborative. Analysts who are closest to the point of collection enter data and perform initial processing one time for the entire force. Modern information systems allow analysts to collaborate on the overall analysis without degrading support to their own commanders, regardless of their geographic dispersion. This distributed, collaborative analysis process starts with the initial intelligence preparation of the battlefield (IPB) and continues throughout operations.

Intelligence **is (1) the product resulting from the collection, processing, integration, analysis, evaluation, and interpretation of available information concerning foreign countries or areas; (2) information and knowledge about an adversary obtained through observation, investigation, analysis, or understanding.**

11-16. The commander drives the intelligence system. Managing the ISR effort entails—

- **Requirements visibility**. Intelligence personnel use procedures and information systems to monitor and display the status of information requirements.
- **Asset visibility**. Intelligence personnel use procedures and information systems to monitor and display collection asset status, location, and activities.
- **ISR assessment capability**. Intelligence personnel use procedures and information systems to assess the effectiveness of the ISR effort and the operational impact of ISR results (such as its success or gaps in collection), and to task collection assets.

11-17. Intelligence provides critical support to all operations, including IO. It supports planning, decision making, target development, targeting, and protecting the force. It is a continuous process for any operation. Surveillance and reconnaissance are the primary means of collecting information used to produce intelligence. A thorough understanding of joint ISR capabilities allows commanders to prepare complementary collection plans. Surveillance and reconnaissance assets focus primarily on collecting

Intelligence preparation of the battlefield **is a systematic approach to analyzing the enemy and environment (for example, weather, terrain, and civil considerations) in a specific geographic area. It integrates enemy doctrine with the weather, terrain, and civil considerations as they relate to the mission and the specific environment. This is done to determine and evaluate enemy capabilities, vulnerabilities, and probable courses of action.**

information about the enemy and the environment to satisfy the priority intelligence requirements (PIR). In the end, the art of intelligence and its focus on supporting the commander are more important than any information system. This art includes an understanding of intelligence, analysis, the enemy, operations, and the commander's needs.

11-18. IPB is the first step toward placing an operation in context. It drives the process that commanders and staff use to focus information assets and to integrate surveillance and reconnaissance operations across the AO. IPB provides commanders with information about the enemy and environment, and how these factors affect the operation. In most cases, IPB allows commanders to fill gaps in information about the enemy with informed assessments and predictions. IPB is also the starting point for situational development, which intelligence personnel use to develop the enemy and environment portions of the common operational picture (COP). As such, IPB is important to the commander's visualization. The commander drives IPB, and the entire staff assists the intelligence staff with continuous updates. All staff officers develop, validate, and maintain IPB components relating to their areas of expertise. For example, the engineer contributes and maintains current mobility and countermobility situation overlays.

Surveillance

11-19. Surveillance involves continuously observing an area to collect information. Wide-area and focused surveillance provide valuable information.

Surveillance **is the systematic observation of aerospace, surface or subsurface areas, places, persons, or things, by visual, aural, electronic, photographic or other means.**

11-20. Army forces at all echelons receive intelligence based on information from national, joint, Army, and commercial surveillance systems. National and theater surveillance systems focus on information requirements for combatant commanders and provide information to all services for theater-wide operations. Continuous theater surveillance helps analysts determine the location and approximate dispositions of enemy land forces. When available, near real-time surveillance platforms—such as the joint surveillance, target attack radar system (JSTARS)— provide moving target indicators. Additionally, long-range surveillance units can provide extremely accurate and valuable information.

11-21. Although the US may enjoy an advantage in surveillance assets, commanders should assume that enemies also have adequate surveillance means. For example, an enemy may purchase high-resolution imagery from commercial space-based systems. Alternatively, the local populace may report Army force actions through the civilian police to enemy intelligence agencies.

Reconnaissance

11-22. Reconnaissance collects information and can validate current intelligence or predictions. Reconnaissance units, unlike other units, are designed to collect information.

***Reconnaissance* is a mission undertaken to obtain by visual observation or other detection methods, information about the activities and resources of an enemy or potential enemy, or to secure data concerning the meteorological, hydrographic, or geographic characteristics of a particular area.**

11-23. Information collected by means other than reconnaissance has great operational and tactical value. However, those assets may not be able to meet some requirements or collect information with adequate accuracy and level of detail. Operational priorities within the theater may limit ground commanders' ability to task theater surveillance systems. Therefore, Army commanders complement surveillance with aggressive and continuous reconnaissance. Surveillance, in turn, increases the efficiency of and reduces the risk to reconnaissance elements by focusing their operations.

11-24. In some situations, the firepower, flexibility, survivability, and mobility of reconnaissance assets allow them to collect information where other assets cannot. Reconnaissance units obtain information on adversary and potential enemy forces as well as on the characteristics of a particular area. Reconnaissance missions normally precede all operations and begin as early as the situation, political direction, and rules of engagement permit (see FM 5-0). They continue aggressively throughout the operation. Reconnaissance can locate mobile enemy C2 assets, such as command posts, communication nodes, and satellite terminals for neutralization, attack, or destruction. Commanders at all echelons incorporate reconnaissance into the conduct of operations (see FM 3-90).

You can never do too much reconnaissance.

General George S. Patton Jr.
War As I Knew It

11-25. Continuous and aggressive reconnaissance does more than collect information. It may also produce effects or prompt enemy actions. The enemy may take forces needed elsewhere to counter friendly reconnaissance efforts. Hostile forces sometimes mistake reconnaissance units for the decisive operation and prematurely expose their dispositions or commit their reserves. Friendly commanders may exploit opportunities revealed by friendly reconnaissance, often using the reconnaissance force as the spearhead. Information from reconnaissance missions allows commanders to refine or change plans and orders, preclude surprises, and save the lives of soldiers.

11-26. Reconnaissance elements may have to fight for information. However, the purpose of reconnaissance is to gain information through stealth, not initiate combat. Reconnaissance operations that draw significant combat power into unplanned actions not in line with the commander's intent may jeopardize mission accomplishment.

11-27. Commanders integrate ISR missions into a single plan that capitalizes on their different capabilities. They synchronize reconnaissance and surveillance missions that employ maneuver units with both the ISR plan and scheme of maneuver.

INFORMATION MANAGEMENT

11-28. ***Information management*** **is the provision of relevant information to the right person at the right time in a usable form to facilitate situational understanding and decision making. It uses procedures and information systems to collect, process, store, display, and disseminate information** (see FM 6-0). IM is far more than technical control of data flowing across networks. It communicates decisions that initiate effective actions to accomplish missions and fuses information from many sources. Successful IM adds meaning to information as it is processed, so decision makers can focus on achieving understanding instead of processing or evaluating information. IM consists of two supporting components: information systems and relevant information.

11-29. Successful IM includes processing. Processing adds meaning to relevant information through progressively higher-level and complex cognitive methods to create a COP. Among other aspects, processing includes lower-level mechanical and mechanistic methods, such as organizing, collating, plotting, and arranging. However, effective processing requires analysis and evaluation (higher-level cognitive methods) to convert information into knowledge and knowledge into understanding. This aspect of processing depends on the insight and flexibility of well-trained and adaptive analysts.

11-30. Commanders and staffs assess the effectiveness of IM by considering how information contributes to lessening the "fog of war." First, untimely information or unusable data has the same effect as not having the information. It either arrives too late or cannot be understood in time to affect the commander's decision. Second, incomplete or imprecise information is better than no information. While not perfect, it contributes to the commander's grasp of the situation and may assist decision making. Finally, irrelevant or inaccurate information is worse than no information. Irrelevant information distracts and delays; inaccurate information may lead to an inappropriate decision. Computers and software cannot make these qualitative distinctions; making them requires soldiers with good judgment.

Information Systems

11-31. ***Information systems*** **are the equipment and facilities that collect, process, store, display and disseminate information. These include computers—hardware and software—and communications, as well as policies and procedures for their use**. Information systems are integral components of C2 systems. Effective information systems automatically process, disseminate, and display information according to user requirements. IM centers on commanders and the information relevant to C2. Commanders make the best use of information systems when they determine their information requirements and focus their staffs and organizations on meeting them.

Relevant Information

11-32. ***Relevant information*** **is all information of importance to commanders and staffs in the exercise of command and control**. To be relevant, information must be accurate, timely, usable, complete, precise, and reliable. Relevant information provides the answers commanders and staffs

need to successfully conduct operations, that is, all elements necessary to address the factors of METT-TC. The intelligence system, for example, provides intelligence that constitutes relevant information on the enemy, terrain and weather, time available (to the enemy), and civil considerations.

11-33. Relevant information results from assigning meaning to data to assist understanding. Processing changes raw data into information by assigning meaning to it. Analysis and evaluation transform information into knowledge, which is presented to commanders as relevant information. When commanders apply judgment to knowledge, it becomes understanding. Understanding enables making informed decisions with less-than-perfect data. Combined with will, understanding generates effective action.

11-34. Relevant information is perishable. If not delivered and acted upon quickly, it may become outdated (no longer relevant) and distort the commander's situational understanding. Masses of data and information may overwhelm the command post. Without effective IM, critical information will be misrouted, delayed, or buried in routine data and overlooked. Information systems can assist in managing volumes of data, but will not do so unless commanders define their information requirements, tie them to their intent, and update them as execution unfolds.

Categories of Information

11-35. IM narrows the gap between available information and information commanders require. Effective IM facilitates rapid dissemination of relevant information. IM assigns information into four categories: specified requirements, implied requirements, gaps, and distractions.

- **Specified requirements**. Specified requirements are requirements the commander specifically identifies. This information may take the form of facts, estimates, or assumptions.
- **Implied requirements**. Implied requirements are important pieces of information that commanders have not specifically requested. Full spectrum operations may place Army forces in situations that lie outside the commander's experience. Commanders may not know to obtain some elements of information. They may not know that they need a piece of information or may not recognize its importance. Effective staffs develop and recommend these additional information requirements. Commanders encourage intellectual versatility and agility within their staff and examine recommendations carefully.
- **Gaps**. Gaps are elements of information commanders need to achieve situational understanding but do not have. Ideally, analysis identifies gaps and translates them into specified requirements. To fill gaps, commanders and staffs make assumptions, clearly identifying them as such. There may be circumstances when commanders and staffs fail to identify a gap. Such circumstances are especially dangerous, particularly when facing an asymmetric threat. The commander not only does not have a piece of relevant information, but also does not know he needs it. This situation may result in the commander being surprised. Commanders and staffs remain adaptive and examine circumstances as they are, rather than fitting circumstances into preconceived notions.

- **Distractions**. Distractions include information commanders do not need to know but continue to be told. Excessive distractions result in information overload.

11-36. Information is further classified as facts, estimates, and assumptions. *Facts* are information commanders want to know and can know with certainty. A fact must be confirmed or come from a reliable source. *Estimates* and *assumptions* are information commanders want to know but cannot know with certainty. Commanders and staffs must use discipline in separating fact from assumption; otherwise they are vulnerable to deception or risk inaccurate situational understanding. Estimates and assumptions primarily include information about the enemy, the future, or factors over which commanders have little or no control.

11-37. Facts, estimates, and assumptions can be either relevant information or distractions. They are relevant information if the commander both wants and needs to know the information. They are distractions if the commander wants to know but does not need to know the information. Photographs, for example, can be distractions. Unless the commander clearly understands the imagery, demands for photos only clog overloaded information systems. Effective IM filters distractions from relevant information.

Quality of Information

11-38. Sources of information are imperfect and susceptible to distortion and deception. Soldiers processing information use these qualities to evaluate it:

- **Accuracy**. The information conveys the actual situation; in short, it is fact.
- **Timeliness**. The information has not been overtaken by events.
- **Usability**. The information is easily understood or displayed in a format that immediately conveys the meaning.
- **Completeness**. The information contains all required components.
- **Precision**. The information has the required level of detail, no more and no less.
- **Reliability**. The information is trustworthy, uncorrupted, and undistorted.

Effective IM keeps commanders and staffs aware of the quality of their information as they use it to build situational understanding.

Commander's Critical Information Requirements

11-39. Commanders channel information processing by clearly expressing which information is most important. They designate critical information that derives from their intent—the commander's critical information requirements (CCIR). **The *commander's critical information requirements* are elements of information required by commanders that directly affect decision making and dictate the successful execution of military operations**. The key to effective IM is answering the CCIR.

11-40. When commanders receive a mission, they and their staffs analyze it using the military decision making process. As part of this process, commanders visualize the battlefield and the fight. CCIR are those key elements

of information commanders require to support decisions they anticipate. Information collected to answer the CCIR either confirms the commander's vision of the fight or indicates the need to issue a fragmentary order or execute a branch or sequel. CCIR directly support the commander's vision of the battle—commanders develop them personally. Once articulated, CCIR normally generate two types of supporting information requirements: friendly force information requirements (FFIR) and PIR.

> ***Priority intelligence requirements*** **are those intelligence requirements for which a commander has an anticipated and stated priority in his task of planning and decision making.**
>
> ***Friendly force information requirements*** **are information that the commander and staff need about the forces available for the operation.**

11-41. CCIR must be focused enough to generate relevant information. Unfocused requests, such as "I need to know if the enemy moves," may provide data but not much useable information. However, "I need to know when the enemy lead brigade reaches Named Area of Interest 2" or "I need to know if the multinational unit on our right flank advances beyond Phase Line Blue" are examples of CCIR specific enough to focus collection and IM priorities.

Essential Elements of Friendly Information

> ***Essential elements of friendly information*** **are the critical aspects of a friendly operation that, if known by the enemy, would subsequently compromise, lead to failure, or limit success of the operation, and therefore must be protected from enemy detection.**

11-42. Although essential elements of friendly information (EEFI) are not part of the CCIR, they become a commander's priorities when he states them. EEFI help commanders understand what enemy commanders want to know about friendly forces and why (see FM 6-0). They tell commanders what cannot be compromised. For example, a commander may determine that if the enemy discovers the movement of the reserve, the operation is at risk. In this case, the location and movement of the reserve become EEFI. EEFI support defensive IO, and as such may become information requirements. EEFI provide a basis for indirectly assessing the quality of the enemy's situational understanding: if the enemy does not know an element of EEFI, it degrades his situational understanding.

Common Operational Picture

11-43. **An *operational picture* is a single display of relevant information within a commander's area of interest**. By collaborating, sharing, and tailoring relevant information, separate echelons create a COP. **A *common operational picture* is an operational picture tailored to the user's requirements, based on common data and information shared by more than one command**. The COP is displayed at a scale and level of detail that meets the information needs of the command at a particular

echelon. C2 systems fuse information from a variety of sources, while information systems facilitate its rapid distribution in usable displays that facilitate understanding.

11-44. Different echelons require different information at different levels of precision and detail. The presentation of information in meaningful images assists its assimilation. IM provides relevant information as meaningful displays rather than masses of data. The COP allows collaborative interaction and real-time sharing of information among commanders and staffs without providing them with too much or too little information.

11-45. The Army continues to invest in technologies and develop procedures that increase commanders' ability to understand their battlespace. These modernizing efforts will increase the capability of Army forces to share a full-dimensional, highly accurate COP and rapidly disseminate guidance, orders, and plans. Technological applications that help visualize, illustrate, brief, and rehearse options contribute to a common understanding of the commander's intent and concept of operations. Increasing the speed of analysis, compilation, and communication leaves more time for synthesis—assigning meaning to information and generating potential options.

Situational Understanding

11-46. ***Situational understanding*** **is the product of applying analysis and judgment to the common operational picture to determine the relationships among the factors of METT-TC** (see FM 6-0). It enhances decision making by identifying opportunities, threats to the force or mission accomplishment, and information gaps. It helps commanders identify enemy options and likely future actions, the probable consequences of proposed friendly actions, and the effects of the environment on both. Situational understanding based on a COP fosters initiative in subordinate commanders by reducing, although not eliminating, uncertainty (see Figure 11-3, page 11-16).

11-47. Situational understanding has limits. It is imperfect, particularly with respect to the enemy situation. It requires constant verification. Situational understanding focuses on the current situation. It can reduce the friction caused by the fog of war. However, achieving accurate situational understanding depends at least as much on human judgment as on machine-processed information—particularly when assessing enemy intent and combat power. Simply having a technologically assisted portrayal of the situation cannot substitute for technical and tactical competence. Additionally, portions of the force will not be modernized for some time. The level of situational understanding between modernized and less modernized units may vary over time. Commanders recognize the disparity between organizations and adjust procedures and subordinate unit missions accordingly.

Information Management in Full Spectrum Operations

11-48. IM is a command responsibility. IM plans establish responsibilities and provide instructions for managing information. The IM plan is the commander's "concept of operations" for handling information. Effective IM plans cover the entire scope of operations. Designated staff elements refine the IM plan and provide overall management of information.

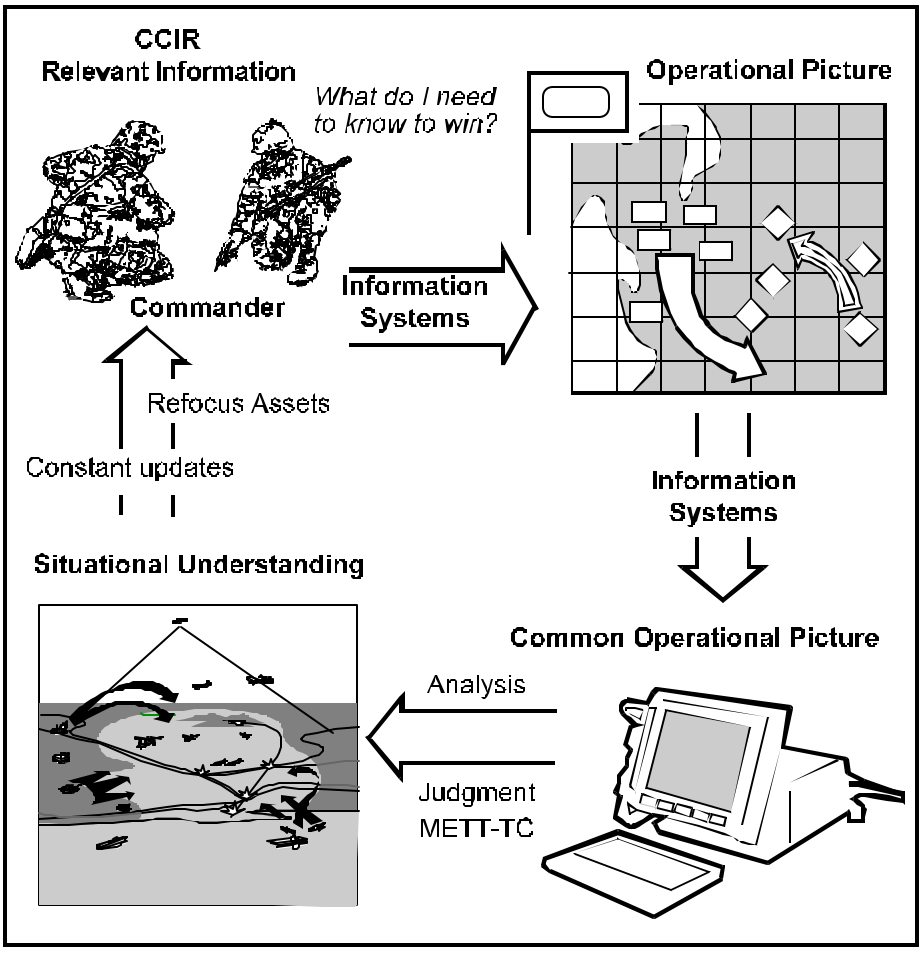


Figure 11-3. Situational Understanding

INFORMATION OPERATIONS

11-49. IO are primarily shaping operations that create and preserve opportunities for decisive operations. IO are both offensive and defensive. Related activities—public affairs and civil-military operations (CMO)—support IO.

Information operations **are actions taken to affect adversary, and influence others', decision making processes, information and information systems while protecting one's own information and information systems.**

11-50. The value of IO is not in their effect on how well an enemy transmits data. Their real value is measured only by their effect on the enemy's ability to execute military actions. Commanders use IO to attack enemy decision making processes, information, and information systems. Effective IO allow commanders to mass effects at decisive points more quickly than the enemy. IO are used to deny, destroy, degrade, disrupt, deceive, exploit, and influence the enemy's ability to exercise C2. To create this effect, friendly forces attempt to influence the enemy's perception of the situation.

11-51. Similarly, IO and related activities affect the perceptions and attitudes of a host of others in the AO. These include the local population, displaced persons, and civilian leaders. IO are shaping operations that help commanders create favorable conditions for not only decisive operations but also sustaining operations. Commanders use IO and related activities to mitigate the effects of enemy IO, as well as adverse effects stemming from misinformation, rumors, confusion, and apprehension.

Offensive information operations **are the integrated use of assigned and supporting capabilities and activities, mutually supported by intelligence, to affect enemy decision makers or to influence others to achieve or promote specific objectives.**

Defensive information operations **are the integration and coordination of policies and procedures, operations, personnel, and technology to protect and defend friendly information and information systems. Defensive information operations ensure timely, accurate, and relevant information access while denying adversaries the opportunity to exploit friendly information and information systems for their own purposes.**

11-52. Successful IO require a thorough and detailed IPB. IPB includes information about enemy capabilities, decision making style, and information systems. It also considers the effect of the media and the attitudes, culture, economy, demographics, politics, and personalities of people in the AO. Successful IO influences the perceptions, decisions, and will of enemies, adversaries, and others in the AO. Its primary goals are to produce a disparity in enemy commanders' minds between reality and their perception of reality and to disrupt their ability to exercise C2 (see FM 3-13).

11-53. Offensive and defensive operations use complementary, reinforcing, and asymmetric effects to attack enemies, influence adversaries and others, and protect friendly forces. On a battlefield where concentrating forces is hazardous, IO can attack enemy C2 systems and undermine enemy capabilities and will to fight. It can reduce friendly vulnerabilities and exploit enemy weaknesses. Where the use of force is restricted or is not a viable option, IO can influence attitudes, reduce commitment to a hostile cause, and convey the willingness to use force without actually employing it. Information used in this manner allows friendly forces to accomplish missions faster, with fewer casualties.

Offensive Information Operations

11-54. The desired effects of offensive IO are to destroy, degrade, disrupt, deny, deceive, exploit, and influence enemy functions. Concurrently, Army forces employ elements of offensive IO to affect the perceptions of adversaries and others within the AO. Using the elements of IO offensively, Army forces can either prevent the enemy from exercising effective C2 or leverage it to their advantage. Ultimately, IO targets are the human leaders and human decision making processes of adversaries, enemies, and others in the AO.

Defensive Information Operations

11-55. Defensive IO protect friendly access to relevant information while denying adversaries and enemies the opportunity to affect friendly information and information systems. Defensive IO limit the vulnerability of C2 systems.

Information Operations Elements

11-56. Integrating offensive and defensive IO is essential to success. Many activities or operations comprise IO. Each element may have offensive or defensive applications (see FM 3-13).

Information Operations Elements

- Military deception
- Counterdeception
- Operations security
- Physical security
- Electronic warfare
  - Electronic attack
  - Electronic protection
  - Electronic warfare support
- Information assurance
- Physical destruction
- Psychological operations
- Counterpropaganda
- Counterintelligence
- Computer network attack
- Computer network defense

11-57. **Military Deception**. Military deception includes measures designed to mislead adversaries and enemies by manipulation, distortion, or falsification. Its aim is to influence the enemy's situational understanding and lead him to act in a manner that favors friendly forces.

11-58. **Counterdeception**. Counterdeception includes efforts to negate, neutralize, or diminish the effects of, or gain advantage from, a hostile deception operation. Counterdeception supports offensive IO by reducing harmful effects of enemy deception. Defensively, counterdeception identifies enemy attempts to mislead friendly forces.

11-59. **Operations Security**. Operations security (OPSEC) denies the enemy information critical to the success of friendly military operations. It contributes to the security of Army forces and their ability to surprise enemies and adversaries. OPSEC identifies routine activities that may telegraph friendly intentions, operations, capabilities, or military activities. It acts to suppress, conceal, control, or eliminate these indicators. OPSEC includes countersurveillance, signal security, and information security.

11-60. **Physical Security**. Physical security prevents unauthorized access to equipment, installations, and documents. It safeguards and protects information and information systems.

11-61. **Electronic Warfare**. Electronic warfare (EW) is military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. EW can cause an enemy to misinterpret the information received by his electronic systems. EW includes—

- **Electronic attack**. Electronic attack involves actions taken to degrade, neutralize, or destroy enemy electronic combat capabilities. Actions may include lethal attack, such as antiradiation missiles and directed energy weapons, and nonlethal electronic attack, such as jamming.

- **Electronic protection**. Electronic protection involves actions taken to protect friendly use of the electronic spectrum by minimizing the effects of friendly or enemy EW. Actions may include radio silence and antijamming measures.
- **Electronic warfare support**. Electronic warfare support involves detecting, identifying, locating, and exploiting enemy signal emitters. It contributes to achieving situational understanding, target development and acquisition, damage assessment, and force protection.

11-62. **Information Assurance**. Information assurance protects and defends information systems. Threats to information systems include physical destruction, denial of service, capture, environmental damage, and malfunctions. Information assurance provides an enhanced degree of confidence that information and information systems possess the following characteristics: availability, integrity, authentication, confidentiality, and nonrepudiation. Computer network defense is part of this element.

11-63. **Physical Destruction**. Physical destruction applies combat power against IO-related targets. Targets include information systems, EW systems, and command posts. Physical destruction that supports IO is synchronized with other aspects of the operation. For example, when deciding whether to destroy an enemy command post, the friendly commander weighs the advantages gained from disrupting enemy C2 against those gained from collecting information from the command post's radio traffic.

11-64. **Psychological Operations**. Psychological operations (PSYOP) are planned operations that influence the behavior and actions of foreign audiences by conveying selected information and indicators to them (see JP 3-53; FM 3-05.30). The aim of PSYOP is to create behaviors that support US national interests and the mission of the force. PSYOP are closely integrated with OPSEC, military deception, physical destruction, and EW to create a perception of reality that supports friendly objectives.

11-65. **Counterpropaganda**. Counterpropaganda includes activities directed at an enemy or adversary conducting PSYOP against friendly forces. Counterpropaganda can contribute to situational understanding and expose enemy attempts to influence friendly populations and military forces. Preventive actions include propaganda awareness programs that inform US and friendly forces and friendly populations about hostile propaganda.

11-66. **Counterintelligence**. Counterintelligence consists of activities that identify and counteract threats to security posed by espionage, subversion, or terrorism. It detects, neutralizes, or prevents espionage or other intelligence activities. Counterintelligence supports the commander's requirements to preserve essential security and protect the force.

11-67. **Computer Network Attack**. Computer network attack consists of operations that disrupt, deny, degrade, or destroy information resident in computers and computer networks. It may also target computers and networks themselves. Although theater or national elements normally conduct computer network attack, the effects may be evident at corps and below.

11-68. **Computer Network Defense**. Computer network defense consists of all measures to defend computers and other components that are

interconnected in electronic telecommunications networks against computer network attacks by an adversary. Such measures include access controls, detection of malicious computer code and programs, and tools to detect intrusions. Army forces use inherent capabilities and accomplish specific computer network defense actions to defend computer networks from unauthorized users.

Related Activities

11-69. Public affairs and CMO are activities related to IO. Both communicate information to critical audiences to influence their understanding and perception of military operations. Related activities are distinct from IO because they do not manipulate or distort information; their effectiveness stems from their credibility with the local populace and news media. Public affairs and CMO—prime sources of information—link the force, the local populace, and the news media. They also provide assessments of the impact of military operations on civilians, neutrals, and others within the battlespace.

11-70. **Public Affairs**. Public affairs operations influence populations by transmitting information through the news media. They fulfill the Army's obligation to keep the American people and the Army informed. Public affairs help to establish conditions that lead to confidence in the Army and its readiness to conduct operations in peace, conflict, and war. Disseminating this information is desirable and consistent with security. Information disseminated through public affairs counters the effects of propaganda and misinformation.

11-71. **Civil-Military Operations**. CMO applies civil affairs to military operations. It encompasses activities that commanders take to establish, maintain, influence, or exploit relations between military forces and civil authorities—both governmental and nongovernmental—and the civilian populace. Commanders direct these activities in friendly, neutral, or hostile AOs to facilitate military operations and consolidate operational objectives. Civil affairs may include performance by military forces of activities and functions normally the responsibility of local government. These activities may occur before, during, or after other military actions. They may also occur as standalone operations. CMO is the decisive and timely application of planned activities that enhance the relationship between military forces and civilian authorities and population. They promote the development of favorable emotions, attitudes, or behavior in neutral, friendly, or hostile groups. CMO range from support to combat operations to assisting countries in establishing political, economic, and social stability (see JP 3-57).

PLANNING AND PREPARING TO ACHIEVE INFORMATION SUPERIORITY

11-72. Information superiority requires extensive planning and preparation. It cannot be an afterthought. As an element of combat power, information requires the same attention as the other elements.

11-73. The foremost information superiority planning requirement is vertical and horizontal integration of ISR, IO, and IM. Army force plans support joint force commander (JFC) objectives and receive support from the JFC. In

Chapter 12

Combat Service Support

Before a commander can even start thinking of maneuvering or giving battle, of marching this way and that, of penetrating, enveloping, encircling, of annihilating or wearing down, in short of putting into practice the whole rigmarole of strategy, he has—or ought—to make sure of his ability to supply his soldiers with those 3,000 calories a day without which they will very soon cease to be of any use as soldiers; that roads to carry them to the right place at the right time are available, and that movement along these roads will not be impeded by either a shortage or a superabundance of transport.

Martin Van Creveld
Supplying War

12-1. Combat service support (CSS), like all other battlefield operating systems, is commanders' business. Commanders view operations and CSS as interdependent. CSS is an enabling operation that generates and sustains combat power for employment in shaping and decisive operations at the time and place the force commander requires. Commanders lay the groundwork to seize the initiative, maintain momentum, and exploit success by combining and balancing mission and CSS requirements.

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12-2. The force commander is responsible for integrating CSS into the overall operation. The CSS commander, as the force commander's primary CSS operator, assists in this. Operators and CSS planners view complex military problems from different perspectives. Without integration, the overall operation and CSS proceed along separate paths that may not support each other. With integration, the operational and CSS perspectives both contribute to the common operational picture (COP) that supports continuous assessment, planning, preparation, and execution.

PURPOSE OF COMBAT SERVICE SUPPORT

12-3. CSS is a major component of sustaining operations. The art of CSS involves projecting a strategically responsive force that generates decisive combat power. Successful application of the art of CSS requires proper synchronization between operational and tactical commanders and their CSS commands. Effective synchronization of operational and tactical requirements enables force commanders to initiate and sustain operations and extend their operational reach.

12-4. ***Combat service support reach operations*** **involve the operational positioning and efficient use of all available CSS assets and capabilities, from the industrial base to the soldier in the field** (see Figure 12-1). They enable force commanders to extend operational reach and to deploy and employ the force simultaneously, without pause. CSS reach operations merge operational art and science into an operations enabler. They minimize the CSS footprint in theater by deploying the minimum essential CSS elements to the area of operations (AO) and establishing links to and fully exploiting all available sources of support. CSS reach operations include the use of intermediate staging bases (ISBs), forward-deployed bases, Army pre-positioned stocks, and continental US (CONUS) resources. CSS reach operations capitalize on split-based and modular operations; they take maximum advantage of all available sources of support for follow-on sustainment.

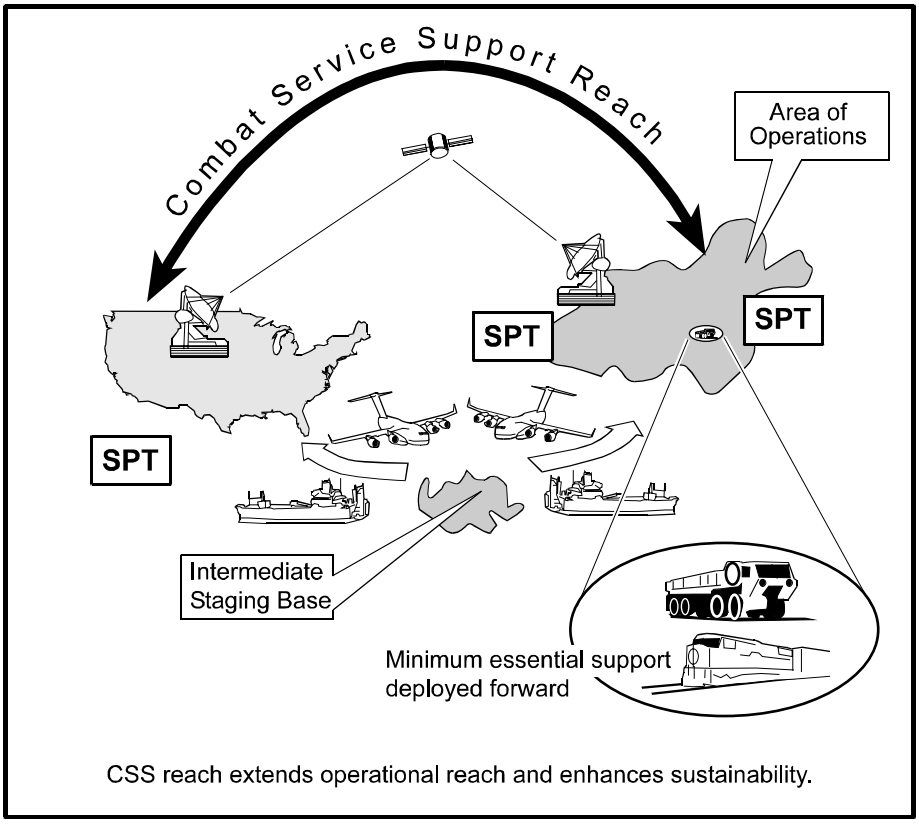

Figure 12-1. Combat Service Support Reach

12-5. CSS is integrated at all levels of war through a seamless distribution system. Active and reserve component, DOD and DA civilian, contractor, joint, and multinational assets all provide CSS from CONUS to and within the theater of operations. CSS operations enable the commander to generate combat power for employment in conducting shaping and decisive operations within the required time and at a tempo faster than the enemy can react.

COMBAT SERVICE SUPPORT CHARACTERISTICS

12-6. Force commanders visualize and describe the concept of CSS together with their CSS commanders. To help them describe the considerations required to conduct (plan, prepare, execute, and assess) successful operations, commanders view CSS characteristics from the perspective of the overall operation. CSS characteristics are integrated throughout the operational framework, guide prudent planning, and assist the staff in developing the support plan. (FM 4-0 discusses the relationship between joint logistic and joint personnel principles and the US Army CSS characteristics). CSS characteristics seldom exert equal influence, and their importance varies by situation. The commander identifies CSS characteristics having priority during an operation; they become the foundation for preparing the concept of CSS. The CSS characteristics are—

- **Responsiveness**. Responsiveness is the crucial characteristic of CSS. It means providing the right support in the right place at the right time. Responsiveness includes the ability to foresee operational requirements. It involves identifying, accumulating, and maintaining the minimum assets, capabilities, and information necessary to meet support requirements. On the other hand, the force that accumulates enough material and personnel reserves to address every possible contingency usually cedes the initiative to the enemy.
- **Simplicity**. Simplicity means avoiding complexity in both planning and executing CSS operations. Mission orders, drills, rehearsals, and standing operating procedures (SOPs) contribute to simplicity.
- **Flexibility**. The key to flexibility lies in the expertise for adapting CSS structures and procedures to changing situations, missions, and concepts of operations. CSS plans and operations must be flexible enough to achieve both responsiveness and economy. Flexibility may include improvisation. Improvisation is the ability to make, invent, or arrange for what is needed from what is at hand. Improvised methods and support sources can maintain CSS continuity when the preferred method is undefined or not usable to complete the mission.
- **Attainability**. Attainability is generating the minimum essential supplies and services necessary to begin operations. Commanders determine minimum acceptable support levels for initiating operations.
- **Sustainability**. Sustainability is the ability to maintain continuous support during all phases of campaigns and major operations. CSS planners determine CSS requirements over time and synchronize the delivery of minimum sustainment stocks throughout the operation.
- **Survivability**. Being able to protect support functions from destruction or degradation equates to survivability. Robust and redundant support contributes to survivability, but may run counter to economy.

- **Economy**. Resources are always limited. Economy means providing the most efficient support to accomplish the mission. Commanders consider economy in prioritizing and allocating resources. Economy reflects the reality of resource shortfalls, while recognizing the inevitable friction and uncertainty of military operations.
- **Integration**. Integration consists of synchronizing CSS operations with all aspects of Army, joint, interagency, and multinational operations. The concept of operations achieves this through a thorough understanding of the commanders' intent and synchronization of the CSS plan. Integration includes coordination with and mutual support among Army, joint, multinational, and interagency CSS organizations.

CSS characteristics are integrated throughout the operational framework. They guide prudent planning and assist the staff in developing the CSS plan (see JP 1-0; JP 4-0; FM 4-0).

COMBAT SERVICE SUPPORT FUNCTIONS

12-7. CSS consists of many interrelated functions. Planning, managing, and executing support involves synchronizing and integrating them. At all levels of operations, the key CSS functions include—

- **Maintenance**. Keep materiel in a serviceable, operational condition, return it to service, or update and upgrade its capability (see FM 3-04.500; FM 4-30.2).
- **Transportation**. Move and transfer units, personnel, equipment, and supplies to support the concept of operations (see JP 4-01; FM 4-01).
- **Supply**. Acquire, manage, receive, store, and issue all classes of supply (except Class VIII) required to equip and sustain Army forces. Supply also covers the turn-in, exchange, and/or disposition of items (see JP 4-0; JP 4-03; FM 4-20).
- **Combat health support**. Maintain the force by preventing disease nonbattle injury (DNBI) casualties; clearing the battlefield of casualties; providing forward medical treatment; providing en route care during medical evacuation; ensuring adequate Class VIII supplies and medical equipment are available; and providing veterinary, dental, and laboratory services (see JP 4-02; FM 4-02).
- **Field services**. Feed, clothe, and provide personal services for soldiers. Field services include clothing exchange, laundry, shower, textile repair, mortuary affairs, aerial delivery, and food services (see JP 4-06; FM 4-20).
- **Explosive ordnance disposal**. Neutralize domestic or foreign conventional, nuclear, chemical, and biological munitions and devices that present a threat to military operations and civilian facilities, materiel, and personnel (see FM 3-100.38; FM 4-30.12).
- **Human resources support**. Provide all the activities and systems needed for manning the force, personnel support, and personnel services to service members, their families, DA civilians, and contractors. These activities include personnel accounting; casualty management; essential services; postal operations; and morale, welfare, and recreation (see JP 1-0; FM 1-0).

- **Financial management operations**. Financial management operations provide finance and resource management services to commanders. Finance services include pay for vendors, services, accounting, central funding, technical advice, and policy guidance. Resource management services include technical advice to commanders on resource management implications and on the costs of preparing and conducting operations (see JP 1-06; FM 1-06).
- **Religious support**. Provide and perform religious support operations for the commander to protect the soldiers', family members', and authorized civilians' free exercise of religion. This includes the personal delivery of rites, sacraments, ordinances, spiritual care, religious counseling, spiritual fitness training and assessment, religious worship services, and advice to the command on matters of religion, morals, morale, and coordination with nongovernmental organizations (NGOs) and private voluntary organizations as appropriate (see JP 1-05; FM 1-05).
- **Legal support**. Perform operational law duties and provide advice and services in military justice, international law, administrative law, civil law, claims, and legal assistance in support of the command, control, and sustainment of operations (see FM 1-04).
- **Band Support**. Provide music to enhance unit cohesion, morale, and to musically support the entire spectrum of military operations. Support information operations, and should be integrated into public affairs, civil affairs, and psychological operations plans. When the musical mission of bands is no longer feasible due to the intensity of conflict, augment security operations for command posts, or augment perimeter security for enemy prisoner of war and civilian internee operations (see FM 1-08).

12-8. General engineering and contract support also support sustaining operations. General engineering involves constructing, repairing, operating, and maintaining infrastructure and facilities to enhance provision of sustainment and services (see JP 4-04; FM 3-34.250). Contracting support obtains and provides supplies, services, and construction labor and materiel. Contracting often provides a responsive option or enhancement to support the force (see FM 4-100.2).

COMBAT SERVICE SUPPORT PLANNING AND PREPARATION

12-9. Commanders of combatant commands, joint forces, ARFORs, Army service component commands (ASCCs), theater support commands, and other operational-level organizations are primarily responsible for CSS planning and preparation within a theater. CSS commanders assist force commanders in developing CSS plans based on the vision and intent of higher commanders. Force commanders visualize what needs to be done to support their concept of operations and convey that vision and intent to their CSS commanders. CSS commanders and staffs develop the concept of CSS. The staff then directs subordinate units to take actions to support the concept of operations. They consider availability of sustainment support from the CONUS base, support from pre-positioned stocks, the maturity of CSS resources in theater,

host nation and multinational support available, and support provided by other organizations. This process is common to all levels of command.

COMBAT SERVICE SUPPORT PLANNING

12-10. Force commanders integrate operational and CSS planning through the COP. They require timely CSS information to plan effectively. Staffs assist commanders by determining detailed CSS requirements during mission analysis. CSS planners use planning factors to quantify requirements. Parallel planning among staffs develops CSS plans that provide enough support to generate the requisite combat power for each phase of the operation. The CSS plan anticipates CSS requirements by phase; CSS operators respond to adjustments force commanders make during execution. CSS planning lets commanders make operational adjustments while the force continually generates and sustains combat power.

Combat Service Support Priorities

12-11. Force commanders maximize the use of limited resources by establishing CSS priorities and directing priorities of support. CSS commanders and staffs then develop a concept of CSS that meets the force commander's intent and planning guidance. In developing the concept of CSS, they ensure that it is responsive and flexible enough to accommodate changes in the situation. The force commander's decision to exploit an opportunity, reconstitute, prepare for future operations, or continue current operations may alter CSS priorities. Shifting operational priorities may require a corresponding shift in CSS priorities. During shifts, a temporary reduction in CSS capability may occur; however, CSS operations never completely cease.

Combat Service Support Estimates

12-12. The force commander directs the staff and CSS commanders to provide estimates that examine support to operational missions and requirements. CSS estimates, based on a thorough logistics preparation of the theater, provide a comprehensive and meaningful picture of CSS units, their capabilities, and options for employment. Personnel, combat health support, and CSS estimates are used to develop CSS plans and annexes. Force commanders require CSS personnel to express capabilities and their implications in operationally significant terms. Force commanders state their requirements to CSS commanders and staffs in a manner that achieves shared understanding. These requirements may include—

- The distance and locations to move the force.
- How positioning CSS assets affects the concept of operations.
- How long particular equipment must remain operational under tactical conditions.
- The types of material necessary for shaping and decisive operations throughout the AO.
- The availability and authority for use of Army pre-positioned stocks.
- Awareness of factors that limit operational reach and sustainability and ways to alleviate the situation.
- Rapid recovery and redeployment of scarce logistic assets, equipment, and supplies following the completion of operations.

- Expected medical or DNBI casualties and replacement rates.
- Security considerations based on the current threat assessment.
- Resource constraints on operational infrastructure repair.

12-13. Commanders understand that CSS is both an art and a science. The CSS command and staff challenge is to present force commanders with meaningful information that uses operational measures of support at the appropriate level of detail. Technology advances—such as improved asset visibility, the global transportation network, improved distribution methods, and enhanced CSS reach capabilities—enable CSS planners to prepare credible CSS plans that meet force commander requirements.

Concept of Combat Service Support

12-14. Force commanders use CSS characteristics to describe how CSS capabilities enable the force to generate and sustain combat power. CSS commanders and staffs use the military decision making process to develop CSS courses of action. The concept of CSS derives from the course of action that best supports the overall operation. In evaluating courses of action, commanders and staffs ask questions similar to these:

- Does the force projection flow generate the requisite combat power in accordance with the operational commander's priorities?
- Are we generating the appropriate level of CSS at the right locations for each phase of the operation?
- Can we simultaneously sustain the entire force throughout the operation?
- Which characteristics of CSS have priority during each phase of the operation? Are they addressed in the CSS plan?
- Are the distribution networks in place to accommodate the sustainment flow?
- Can we generate the operational reach and sustainability adequate for simultaneous and continuous operations, or do we accept an operational pause?
- Have we achieved the proper balance between combat, combat support (CS), and CSS forces, thereby optimizing our operational reach and sustainability?
- What is the plan for reconstitution of forces, if required?
- Have we adjusted the CSS factors influencing operational reach and sustainability, thereby maximizing the effectiveness of the distribution system and the lines of communications (LOCs)?
- Have we taken advantage of all available facilities, resources, and sources of support?
- Have we allocated resources and established CSS priorities?
- Have we assigned responsibilities and made the necessary command and control (C2) arrangements to execute the support plan?

COMBAT SERVICE SUPPORT PREPARATION

12-15. The force commander prepares the battlespace by integrating the operational and CSS components. CSS commanders assist by obtaining,

managing, and distributing the resources identified during planning. Negotiating host nation support agreements, contingency contracts, and other bilateral agreements, such as the acquisition and cross-service agreements (ACSAs), are part of this effort. CSS preparation also includes coordinating with strategic-level CSS managers to gain access to pre-positioned stocks or assets received through national-level agreements. Support base locations and LOCs are established and improved to meet operational requirements. Theater infrastructure, host nation support, multinational CSS, and contracted support are vital to Army CSS plans and operations. Each contributes to generating and sustaining combat power.

Theater Infrastructure

12-16. Army forces deploy with sufficient CSS to conduct operations upon arrival in theater. That amount may vary, depending on the availability of pre-positioned stocks. For protracted operations, CSS personnel plan for and prepare the essential theater infrastructure to establish the support base. The support base becomes critical for long-duration, enhanced responsiveness and force sustainability. All required facilities are usually not available at the start of operations. Facility capacities may be inadequate or damaged. Improving the theater base capabilities may require early deployment of maintenance, engineering, or terminal operations forces. Contracting support staff and medical, finance, legal, civil affairs, and resource management personnel—who are among the first to deploy—arrange access to host nation capabilities at staging and support bases. The requirement for adequate CSS capability is especially important in the early stages of operations, when reception, staging, onward movement, and integration are critical.

12-17. The time required to prepare a support base depends upon the extent and nature of the existing civil and military infrastructure in theater. When ports, airfields, roads, depots, repair facilities, supplies, and transportation facilities exist, CSS operations begin quickly, without establishing a new support base. When capabilities do not exist, Army units operate from austere theater bases until CSS facilities are built. In an immature theater, CSS and construction units are needed much earlier in the deployment flow.

12-18. Army watercraft are often essential in an immature theater. They allow commanders to avoid obstacles and enhance their scheme of maneuver. Army watercraft can self deploy to the theater of operations, augment existing seaport capabilities with in-stream offloading, and support reception capabilities through joint logistics over-the-shore (JLOTS) operations. They can supplement limited surface transportation capabilities by allowing coastal waterways to be used as main supply routes or through riverine operations.

Host Nation Support

12-19. Host nation support agreements are formal agreements with a nation to provide support and services. They include in-theater as well as en route support. Host nation support agreements can significantly reduce the preparation requirement for early augmentation of CSS forces. Their effective use can reduce the CSS forces required in theater and free early strategic lift for other purposes. Host nation support may include resources, transportation

assets, civilian labor, local security and police forces. Other examples include—

- Operation, maintenance, and security of seaports and airports.
- Construction and management of routes, railways, and inland waterways.
- Transportation support.
- Provision of limited health services.
- Subsistence support.
- Laundry and bath support.
- Petroleum support and bulk storage or warehouse support for storage.
- Augmentation of existing communication and automation networks.
- Indigenous religious leadership support.

Multinational Support

12-20. US law requires US forces to be reimbursed for support they provide to other militaries. When the necessary agreements are in place, Army forces may provide CSS to and receive support from multinational forces. Operations in Saudi Arabia, Somalia, Bosnia, and Kosovo all required support to multinational partners. Given authority, the US negotiates agreements with multinational partners. Even in cases where formal agreements exist, multinational sustainment presents a challenge. Commanders assess differences in support doctrine, quality of support standards, stockage levels, CSS mobility, interoperability, infrastructure, national resource limitations, and domestic law for their effect on preparation. The level of standardization among participating countries affects how support is provided.

12-21. In the absence of appropriate international agreements, no authority exists for combatant commanders to provide for or accept CSS from multinational partners. Legal authority to exchange support with multinational partners rests with host nation support agreements and other bilateral agreements, such as ACSAs. Approval to exchange support with NGOs normally comes from the Department of State. Bilateral agreements are necessary to leverage local resources to support deployed forces. Commanders and staffs at all levels need to be familiar with the scope and authorities provided by existing agreements. Staff estimates should reflect only those resources provided for by agreement. Negotiation and approval of these agreements may be restricted to the National Command Authorities or may be limited by statute or other legislative restrictions. Where no international agreements exist, requirements that need negotiation and approval must be identified early. The operational law judge advocate can assist in resolving issues involving international agreements.

A *coordinating authority* is ... [an] individual assigned responsibility for coordinating specific functions or activities involving forces of two or more military departments or two or more forces of the same service.... Coordinating authority is a consultation relationship, not an authority through which command may be exercised.

12-22. Preparing for multinational support starts early in the planning process and continues throughout an operation. Although CSS is primarily a national responsibility, that fact cannot supplant detailed multinational CSS planning. Planners provide for emergency support that goes beyond requirements for temporary or routine circumstances. In some cases, US commanders exercise control over the various national support units; in others, they may have only coordinating authority. A multinational military commission may be formed to determine what nations are assigned specific support functions. When feasible, multinational commanders form a multinational support staff section (see FM 3-16).

12-23. Forces may be designated as lead nation or role specialization nation. *Lead nation* occurs when one nation assumes the responsibility for providing a broad spectrum of support in all or part of a multinational operation. *Role specialization* occurs when one nation assumes the responsibility for providing a particular class of supply (for example fuels) or service.

12-24. Multinational force commanders may exercise directive CSS authority only under formal multinational agreements. The degree of authority depends on existing agreements or arrangements negotiated among participating nations (see JP 4-08).

Contracted Support

12-25. Throughout its history, the Army has used contractors to support operations. Army forces increasingly rely on contracted support. Using contractors may help prepare CSS by decreasing strategic lift requirements and reducing reliance on military support forces (see JP 4-0; FM 3-100.21; FM 4-100.2). The following types of contractors support Army operations:

- **Systems contractors**. Systems contractors support deployed forces under prearranged contracts awarded by project managers, program evaluation offices, and the US Army Material Command (AMC). They provide specific materiel systems throughout their life cycle, during both peacetime and contingency operations. These systems include, but are not limited to, vehicles, weapons systems, aircraft, C2 infrastructure, and communications equipment.
- **External support contractors**. External support contractors work under contracts awarded by contracting officers serving under the command and procurement authority of supporting headquarters outside the theater. They augment the supported commander's organic CSS capability. For example, AMC's logistics civil augmentation program (LOGCAP) provides external support contractors through its prearranged umbrella contract. AMC logistic support elements administer these contracts in theater.
- **Theater support contractors**. Theater support contractors support deployed operational forces under prearranged contracts or contracts awarded from the mission area. Theater support contractors provide goods, services, and minor construction—usually from local vendors—to meet the immediate operational needs (see FM 4-100.2).

Contractor Support—Operations in the Balkans

As part of Operation Joint Endeavor in 1995, Army forces deployed 25,000 troops into Bosnia under uncertain conditions during the worst Balkan winter in 100 years. Army force commanders understood that war-torn Bosnia was an immature theater requiring extensive LOGCAP support. The deployment plan also called for establishing an ISB at Kaposvar and Taszar in Hungary, where units prepared for operations before entering the theater. Logisticians from the 21st Theater Army Area Command identified the requirements, and the deputy chief of staff for logistics, US Army, Europe, contracted for billeting, food, laundry and bath services, sanitation, transportation, base camp construction, and translators in the ISB before deployment. Contractors provided similar services in Bosnia, where numerous base camps supported the force. Contracted trucks hauled tons of building material, gravel, and other construction supplies as well as food, water, and other necessities. As in past operations, commanders retained total responsibility for soldier needs. However, contractors executed steady-state sustainment that enhanced the Army support structure and contributed toward mission accomplishment.

COMBAT SERVICE SUPPORT EXECUTION

12-26. The force commander is responsible for integrating CSS considerations into the overall operation. The types and quantities of CSS required and the methods used to provide it vary by type of operation.

COMBAT SERVICE SUPPORT IN OFFENSIVE OPERATIONS

12-27. Force commanders consider how the operational framework and CSS affect each other during offensive operations. A commander's decision to fight a simultaneous or sequential, linear or nonlinear operation may depend on CSS capabilities. CSS operations may be affected dramatically by such decisions. For example, in linear offensive operations, commanders may secure CSS assets on ground LOCs with maneuver forces. In nonlinear operations, commanders may move CSS primarily by air. Regardless of the operational framework, CSS commanders and staff support the decisive offensive operation at the time and place of the force commander's choosing.

12-28. Effective CSS in offensive operations demands CSS operators who foresee requirements and prepare to meet them before they occur. Force commanders require a simple concept of CSS that is responsive and flexible enough to adjust while executing offensive operations. To sustain momentum and provide freedom of action to exploit success, they integrate CSS considerations into plans. To ensure continuity of support, plans include provisions for CSS units to follow exploiting forces. Due to the tempo of offensive operations, units may experience high losses from combat operations, combat stress, and fatigue. Recognizing the potential for loss during offensive operations, commanders plan for reconstitution. Planners consider the potential effects these losses have on tactical operations, combat health support operations, strength and casualty reporting, replacement operations, religious support, and soldier morale.

12-29. Commanders visualize the effects of rapid tempo on their ability to sustain offensive operations. The tempo and depth of offensive operations wear out equipment and consume great quantities of supplies, particularly bulk fuel and ammunition. The high workloads and evacuation requirements of offensive operations put stress on maintenance, Class IX, and supply operations, and increase Class VII requirements. Greater movement requirements and potentially longer LOCs tax transportation resources. As the Army transitions to a "replace forward, fix rear" maintenance system, contracted support in forward areas during offensive and defensive operations is less viable than in stability operations or support operations.

Full Spectrum Support— 22d Support Command in Southwest Asia

During Operations Desert Shield and Desert Storm, 22d Support Command CSS soldiers provided operational-level support for reception, staging, and onward movement of US and coalition forces. They employed US units and host nation assets, working with the strategic sustainment base, joint and multinational headquarters, and the host government. Army logisticians turned Dhahran airport into the primary aerial port of debarkation, with over 6,700 aircraft arriving between August 1990 and March 1991. CSS soldiers processed thousands of combat troops into the theater, an effort requiring contracted support for food, fuel, water, shelter, and transportation. Contracting, which included placing purchasing power in commanders' hands, aided a rapid build-up. Finance, contracting, and host nation support played major roles in Army CSS efforts.

CSS units created and operated numerous CSS bases to sustain two Army corps in combat. Ammunition and fuel requirements totaled 14,000 tons and 4.5 million gallons daily. With Kuwait's liberation, the 22d Support Command redeployed forces and sustained those left in theater. Simultaneously, CSS soldiers supported humanitarian relief actions for Kurdish refugee camps in Iraq and Turkey and sustained four prisoner of war camps holding 60,000 Iraqis. Throughout Operations Desert Shield and Desert Storm, 22d Support Command demonstrated Army support capability for full spectrum operations.

COMBAT SERVICE SUPPORT IN DEFENSIVE OPERATIONS

12-30. Tactical commanders consider CSS capabilities when deciding whether to conduct a mobile or area defense. For example, in an area defense, commanders may position CSS assets well forward to respond quickly and be protected by maneuver forces. In a mobile defense, commanders may move CSS assets further away from combat and CS forces to free up space for maneuver. Regardless of the type of defense, CSS commanders and staffs design a concept of CSS that allows a smooth transition to the offense.

12-31. CSS requirements for defensive operations depend on the type of defense. Forces in a mobile defense consume more fuel than those in an area defense. Typically, bulk fuel consumption may be less than in offensive operations. However, ammunition consumption is higher and will likely have the highest movement priority. Barrier and fortification material is moved

forward in preparation for all types of defense. Chemical defense equipment may also be a significant requirement. As with the offense, the force commander's operational design affects the concept of CSS. The CSS commander synchronizes the concept of CSS with the force commander's concept of operations. The CSS plan includes branches or sequels that address generating and sustaining combat power after the transition to offensive operations.

COMBAT SERVICE SUPPORT IN STABILITY OPERATIONS

12-32. CSS requirements in stability operations vary greatly, depending on the mission and circumstances. Force commanders conduct stability operations in complex, dynamic, and often asymmetric environments. For example, they may be required to establish a presence, separate combatants, restore order, or perform other operations that provide stability. Frequently, force commanders must repair enough infrastructure to maneuver and sustain the force while simultaneously stabilizing the situation. CSS commanders and staffs devise concepts of CSS that give force commanders flexibility to meet changing situations.

12-33. Some stability operations, such as peace enforcement operations, may involve levels of support comparable to offensive and defensive operations. In other operations, demands may be lower but distances between units may increase. In stability operations, contracted support is often more appropriate than in other operations. Contracting may be appropriate for such CSS activities as food service; morale, welfare, and recreation; billeting; transportation; shower; laundry; and clothing repair. It is important to integrate support not only with other US services and multinational partners but also with nongovernmental organizations. Class IV and explosive ordnance disposal support may be prominent requirements in stability operations.

COMBAT SERVICE SUPPORT IN SUPPORT OPERATIONS

12-34. In support operations, CSS forces may conduct the decisive operation. Support operations involve providing relatively high levels of CSS-related support to civilian populations. For example, a commander given a disaster relief mission—such as aiding victims of a hurricane where thousands of homes were destroyed—may need to provide water, food, medical care, and electricity to people in communities spread over hundreds of miles. In other support operations, such humanitarian relief missions in areas stricken by floods or drought, the force must counter disease and starvation. Support operations such as these involve providing services to meet the immediate needs of designated groups for a limited time until civil authorities can assume responsibility. Distribution of food, water, supplies, and field services are often the primary activities. Combat health support, which involves such activities as providing basic necessities and establishing or improving basic health and sanitation services, may be prominent as well. The lack of usable road space may place a greater dependency upon air assets. The Army forces best suited to accomplishing these complex missions in difficult conditions are CSS organizations.

12-35. How force commanders approach providing support to civil authorities affects the concept of CSS. CSS commanders and staffs devise concepts of CSS that meet mission requirements in the priority that force commanders specify. Planners work with multinational, joint, and interagency planners,

along with local authorities, to ensure support responsibilities, priorities, and standards, as well as rules of engagement, are clearly laid out.

TACTICAL COMBAT SERVICE SUPPORT

12-36. Tactical CSS supports battles and engagements. While tactical operations can last for weeks, tactical support is measured in days or hours. Tactical CSS sustains force momentum. It focuses resources to support the commander's intent and concept of operations and maximize freedom of action. The tactical CSS plan addresses how each CSS function supports the operation. Planning identifies CSS risks. Army units make up the bulk of the tactical CSS structure. Support also comes from host nation, joint, and multinational military organizations; DOD and DA civilians; and civilian contractors—especially in stability operations and support operations.

ARMY COMBAT SERVICE SUPPORT WITHIN JOINT OPERATIONS

12-37. Combatant commanders and staffs, along with their service component commands, manage theater strategic- and operational-level support. At the theater strategic level, combatant commanders and their subordinate service or functional component commanders generate and move forces, materiel, and sustainment into theater (see JP 3-35; JP 4-0; FM 3-35 series; FM 3-100.7).

12-38. In joint operations, coordination and execution of CSS is a service responsibility unless the combatant commander directs otherwise through lead service designation or existing interservice support agreements (ISSAs). Regardless of the joint or multinational command arrangements, the ASCC retains the responsibility for Title 10 support of all subordinate Army units through the service chain of command via administrative control (ADCON) authority. ASCC commanders, together with combatant commanders, identify CSS requirements, coordinate resource distribution from the strategic base, allocate necessary CSS capabilities, and establish Army CSS C2 relationships within the theater of operations. The ASCC commander ensures proper execution of all combatant commander- or ISSA-directed common support requirements within the theater of operations.

12-39. Operational CSS links the national sustainment base capabilities to tactical support requirements during campaigns and major operations. Planners integrate CSS and operational concerns at the operational level. Commanders rely on experience and judgment to balance the deployment and support of combat, CS, and CSS units to generate combat power in accordance with joint force commander (JFC) priorities. Staffs link tactical requirements with inbound strategic support while meeting joint and multinational support responsibilities outlined in applicable combatant command and JFC operation plans or orders.

12-40. Operational-level CSS organizations and staffs interface with elements of the strategic sustainment base that deploy into the theater of operations. National sustainment base operational and tactical-level contingency support includes—

- Defense Logistics Agency (DLA) contingency support teams.
- AMC logistic support elements.
- Elements of the US Army Medical Research and Materiel Command.

- US Transportation Command, through its component commands—the Air Mobility Command, Military Traffic Management Command, and Military Sealift Command.

12-41. Each service is responsible for supporting its own forces except when otherwise directed by DOD or combatant command directives, plans, and orders, or when provided for by agreements with national agencies, services, or other nations. While the Army has been designated as the peacetime DOD executive agent for numerous CSS-related requirements, these responsibilities are normally focused at the national strategic level and may not directly apply to a specific joint operation. In all joint operations, the combatant, joint force, and ARFOR commanders take these DOD-level responsibilities into account when determining the lead service for a specific common user logistic (CUL) requirement.

12-42. Combatant commanders use their directive authority for logistics to assign lead service CUL support requirements. Normally, the service component (or DOD agency, such as DLA) that is the dominant user or most capable organization for a particular common logistic item or service becomes the lead service. These lead service directives often require the Army to plan and provide significant CUL support to other service components, multinational partners, governmental agencies, and nongovernmental agencies. These requirements can generate major planning and resource requirements for ASCCs and the operational-level support commands tasked to meet them.

12-43. Army operational-level CSS and CUL tasks are best executed by operational-level CSS organizations designed and resourced to execute them. Operational-level support organizations include the multifunctional theater support command as well as functional engineer, finance, medical, personnel, and transportation commands. Operational-level support units deploy tailorable early-entry functional modules during the early stages of force projection. The ARFOR commander uses these tailored organizations to provide the functional expertise and C2 capabilities necessary to properly support the force. These modular organizations expand as necessary to provide the proper level of support for each operation or phase (see FM 4-93.4).

12-44. In some situations, tactical-level CSS organizations may perform operational-level support missions. In most cases, tactical-level CSS units require augmentation from echelons above division forces to properly accomplish operational-level support tasks.

NATIONAL PROVIDERS AND NATIONAL STRATEGIC SUPPORT

12-45. National-level CSS is strategic-level support provided by the national economic base, which includes the DOD and military department national providers. At the national strategic level, the Joint Staff, military departments, US Transportation Command, and national CSS providers focus on force readiness and support of force projection operations. Key national CSS providers that support Army operations include the DLA, AMC, US Army Medical Command, US Army Personnel Command, and Defense Finance and Accounting Service. Department of the Army accomplishes the force readiness mission through day-to-day execution of its Title 10 responsibilities. Army CSS Title 10 responsibilities include supplying, equipping,

administering, and maintaining the force. Meeting all responsibilities is essential to maintaining appropriate force readiness levels.

EXTENDING OPERATIONAL REACH AND SUSTAINABILITY

12-46. Operational reach and CSS reach operations are related components of the operational art. Commanders practice operational reach and CSS operations to extend their battlespace in time and space across the range of operations. Effective CSS operations are required to extend the depth and duration of full spectrum operations. Commanders study the factors that influence operational reach and sustainability. Only a thorough understanding of these factors allows commanders to understand how CSS operations generate and sustain combat power.

12-47. CSS can also extend the operational reach by reaching back to the national provider, AMC. The AMC Operations Support Command has forward elements in Korea, Southwest Asia, Europe, and CONUS. The forward elements include Army field support centers. They sustain Army materiel in theater, minimizing the load on strategic lift and theater logistics footprint. As required, the AMC forward command can deploy a modular, tailored logistic support element into the AO. AMC manages pre-positioned and afloat stocks, which are available to combatant commanders. AMC also manages the single stock fund with the ability to pull stocks as required from anywhere in the world into an integrated Army supply and maintenance program.

12-48. Effective CSS allows commanders to initiate and sustain operations over time as well as extend the operational reach of the force. Operational reach reflects the operating ranges of combat, CS, and CSS assets. Sustainability refers to the force's ability to conduct operations over time. CSS commanders enable the force commander to extend operational reach and enhance sustainability through CSS reach operations.

12-49. If military operations extend beyond a force commander's operational reach, culmination normally follows. Commanders arrange operations in time and space to avoid culmination. The essence of the art of CSS involves continuously adjusting CSS plans and operations within the commander's intent to delay or preclude an operational pause or culmination.

Combat Service Support Factors Influencing Operational Reach And Sustainability

12-50. Commanders consider secure LOCs, the distribution system, and C2 as key CSS factors that generate and sustain combat power and extend operational reach and sustainability. In allocating resources, commanders take into account the physical factors that limit a force's operational reach and freedom of action. Ignoring these factors risks culmination. To understand their influence on operations is to master the art of CSS. CSS factors influencing operational reach and sustainability include—

- **Scope of support**. The scope of support refers to the types and levels of support provided to the force. It varies with the type of operation, the time to prepare for an operation, the maturity of the theater, and the phase of the operation. As the theater matures, the type of support provided and the locations of support facilities may change.

- **Distribution networks**. The Army CSS system in theater operates within the joint theater distribution system (see JP 4-01.4; FM 4-01.4). The distribution system consists of several interrelated networks: communications and automation, physical, and resource. These networks provide the asset visibility necessary for efficient and effective distribution. The communications and automation network distributes and correlates CSS data across the force, while assisting all commanders with management of the information. The physical network consists of the quantity and capability of fixed structures and established facilities. It includes factories, warehouses, airfields, seaports, roads, railroads, inland waterways, pipelines, terminals, bridges, tunnels, and buildings. These facilities can be located in CONUS, at an ISB, at a forward deployed base, or in theater. The resource network consists of the people, materiel, and machines operating within and over the physical network.
- **Sources of support**. Support may come from DOD, Army, joint, multinational, host nation, and NGO sources. In addition, theater support contracts can be obtained through contracting or host nation support.
- **Availability of materiel**. Materiel is available to a force through its stocks and resupply. There are several internal constraints on stocks. They include the upload capacity of its soldiers and equipment and the storage capacity for materiel not uploaded. They also include the internal transportation assets needed to move supplies from stockpiles to their point of employment. Effective use of the multiple sources of support can increase the availability of materiel, enhance responsiveness, and improve the flexibility and sustainability of the operation.
- **Modularity**. Modularity is the ability to provide force elements that are interchangeable, expandable, and tailorable to meet changing missions and needs. Modular units combine the assets required to provide a support function or group of related functions. A module can be sent to support a deploying force without adversely affecting the ability of the parent unit to function at a reduced level. Modularity enhances the CSS commander's ability to conduct C2 operations as well as the functional CSS operations in a dispersed environment.

12-51. Force commanders provide for essential CSS functions by tailoring and task organizing a force capable of providing the appropriate level of support throughout an operation. This ensures a proper balance of combat, CS, and CSS capabilities. Provision of all services in the AO can enhance sustainability and operational reach. These services include personnel, medical, field services, maintenance, transportation, religious, financial management, legal, and explosive ordnance disposal.

12-52. LOCs are a key factor of operational reach and CSS reach operations. LOCs are all routes—land, water, and air—that connect military forces with their support base and along which supplies, personnel, equipment, and military forces move. The designation of LOCs and securing their use is commanders' business. LOCs and the assets on them must be protected. LOCs consist of complexes of networks, facilities, procedures, arrangements, and units. They link the strategic sustainment base to the operational support

base and the operational support base to tactical formations. Multiple LOCs require a substantial increase in forces to secure them.

12-53. LOC security and support are essential to CSS operations and may effect combat power allocation. The ability to secure LOCs is an important consideration in determining operational objectives. LOCs require particular attention during nonlinear, episodic, or easily interdicted operations. LOC security and support enables effective management of the distribution system that permits on-time delivery of supplies and extends operational reach.

12-54. Where the force commander establishes the support base influences the course of a campaign and the support plan. Lodgments are generally established near key seaport or airport facilities. They need to allow easy access to strategic sealift and airlift, offer adequate space for dispersal and storage, facilitate transshipment of supplies, and be accessible to multiple LOCs. A key to the success of the CSS plan is the capability of the distribution system to receive, store, manage, maintain, issue, and move materiel and personnel to using activities and units at the right time. An effective distribution system allows commanders to generate and sustain the necessary combat power for each phase of the operation.

Adjusting the Factors

12-55. Commanders adjust and balance CSS factors based on their vision and intent. Commanders can enhance sustainability and extend operational reach by adjusting the scope of support provided. Some CSS functions can be deferred or performed at reduced levels. Doing this during force projection may allow combat forces to move up in the deployment flow. For example, laundry and bath services may be deferred during the early stages of force projection; however, doing this risks disease and adverse morale. Commanders consider such tradeoffs when deciding whether to adjust the scope of support.

12-56. Commanders may adjust the location of certain support activities and facilities to increase responsiveness and force sustainability. If automation and communication networks permit, commanders may require CSS units to perform portions of support functions, such as CSS management and administration, remotely—in an ISB, the main theater base, home station, or CONUS. Split-based operations help minimize the size of the deployed CSS force, reduce demands on LOCs, and increase force agility. The positioning of stocks, units, or other capabilities dedicated for a specific operation is another component of CSS reach operations. These stocks or units may be positioned at home station, an ISB, or another location within the theater of operations.

12-57. Commanders must make maximum use of all sources of support. Several factors can increase the availability of materiel, enhance responsiveness, and improve the flexibility and sustainability of operations. These factors include making effective use of theater support contracts (host nation support and contracted assets), support from other nations, and common user support to all services in theater. They also include efficient use of DOD and DA civilians, civilian contractors, and CSS reach capabilities.

12-58. Digital linkage of combat, CS, and CSS units allows positive control of CSS functions. Combined with reliable and responsive distribution networks, this enhanced asset visibility can achieve optimal stockage levels and

maximize CSS reach capabilities. The COP enables CSS operators to foresee requirements and enhances force commanders' confidence in CSS operations.

12-59. Adjusting CSS factors can entail risks. When necessary, commanders conduct a risk analysis to determine what CSS functions can be deferred, performed at a reduced level, or performed in alternative locations in the short term. Initially deferred functions can be enhanced through follow-on support or call-forward capabilities pre-positioned at an ISB or other location.

12-60. Commanders may also adjust factors related to materiel availability. Information systems and connectivity enhance asset visibility. Coupling them with an effective distribution system allows commanders to reduce in-theater stockage levels. Increasing a unit's basic load may extend its operational reach and sustainability. However, since a unit's upload capacity is normally fixed, increasing the basic load may reduce its agility. This can be offset by increasing the unit's transportation assets if the key concern is the threat of interruptions to the distribution system and LOCs rather than unit agility.

12-61. Commanders can adjust resupply by increasing lift or lift frequency, or by removing transfer bottlenecks at points such as ports, airfields, roads, and bridges. Commanders may also control resupply of critical items by setting priorities and controlling expenditure and supply rates. They can extend operational reach by establishing forward bases and depots and by improving the security and efficiency of LOCs. This is one example of how tactics and CSS interact. Gaining control of the communication centers, transportation nodes, and base areas necessary to support the force requires combat assets.

THE IMPACT OF TECHNOLOGY

12-62. To generate and sustain combat power, commanders conducting full spectrum operations require responsive, flexible, and modular CSS. Key to achieving proper CSS force mix is improved management of information and distribution systems. Technology advances in asset visibility, communications, C2, and distribution methods have increased CSS reach and enable the CSS system to provide rapid throughput with a reduced CSS footprint. Increasing throughput results in faster force projection and reduction of the overall demand for CSS in theater.

12-63. Developing CSS technology will create CSS organizations that are modular, have asset visibility, and are more responsive to the commander's CSS requirements. Technological developments focus on such items as—

- Precision and common-caliber munitions.
- Common chassis family of vehicles and ultrareliable equipment.
- Support vehicles with on-board upload and download capabilities.

Technology continues to evolve, depending on funding and available resources. Developing and fielding new CSS technologies will enable the commander to generate and sustain combat power faster and more decisively than before. Commanders prepare to leverage the capabilities of new CSS technology when it enters the force.

Leveraging Technology—Real-time CSS

During Operations Desert Shield and Desert Storm in the early 1990s, logistic data moved on floppy diskettes manually transported between computers at distant locations, a better method than before but time and resource consuming.

By the late 1990s, logisticians benefited from incredible technological leaps. During Operation Joint Endeavor in 1995, 5th Signal Command created a robust communications architecture that linked CSS supporting units to the theater logistics base in Germany. CSS soldiers used in-transit visibility to track equipment, personnel, and supplies. CSS units used the Standard Army Management Information System (STAMIS) to exchange information near instantaneously. For the first time, commanders and logisticians accessed, planned, and directed CSS at every level.

During Operation Joint Endeavor, radio frequency interrogators tracked equipment shipped from CONUS and throughout the theater and could identify contents within containers. One such container arrived in Taszar, Hungary, releasing a noxious smell, a potentially unsafe situation that required opening the container. Personnel from the freight forwarding activity used radio frequency interrogator technology to read the tag and discovered the presence of powdered battery acid and petroleum products. Forewarned, the CSS soldiers took appropriate measures, and upon opening the container discovered that the acid carton had ruptured during shipment.

In addition to radio frequency interrogators, logisticians used the Defense Transportation Reporting and Control System (DTRACS) to locate troop trains and convoys. DTRACS enabled commanders to track soldiers and equipment, enhance force protection, and redirect assets on the move. Less than five years after the Gulf War, technology significantly enhanced logisticians' capabilities to support Army forces with greater accuracy and speed.

FM 5-34

This reprint contains Changes 1, 2, and 3.

ENGINEER FIELD DATA

HEADQUARTERS, DEPARTMENT OF THE ARMY

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Chapter 4

Mobility

MINE DETECTION

Conduct an analysis by reviewing the terrain, enemy capabilities, and past performances.

MINEFIELD INDICATORS

The following could be indicators of a minefield. (The Thermal Mine Acquisition System [TMAS] can also help you identify mines.)

- Damaged vehicles.
- Dead animals.
- Avoidance by the local populace.
- Signs of digging.
- Signs of concrete removal.
- Holes or grooves in the road.
- Boxes or parcels placed along the road or shoulder.
- Parked vehicles and bicycles without operators.
- Wires on the road surface or extending to the shoulder.
- Metallic devices on the roadway surface.
- Evidence of mine-peculiar supplies (wrenches, shipping plugs, safety collars).
- Disturbances in previous tire tracks.
- Disturbance of road potholes or puddles.
- Disturbance in the cobblestone pattern or missing cobblestone.
- Differences in the amount of moisture or dew on road surface.
- Differences in plant growth (wilting, changing colors, or dead foliage).
- Signs posted on trees that covertly alert the local populace to the presence of mines.

DETECTION AND REMOVAL

Mine-detection and removal methods include visual inspections, probing, using an electronic mine detector, and clearing manually.

VISUAL INSPECTIONS

Check for ground disturbances, posted signs, tripwires, odd features on the ground, and signs of road repairs.

PROBING

Fasten and secure all equipment to your body and remove all metallic objects from your body. Use a slender, nonmetallic probe, in the prone position (as a last resort only, use a bayonet, a screwdriver, a cleaning rod, an antenna, or another sharp object) and probe every 2.5 centimeters across a 1-meter front (gently push the probe into the ground at a 30-degree angle while applying just enough pressure on the probe to sink it slowly into the ground to a depth of at least 3 inches).

ELECTRONIC MINE DETECTOR

Rotate operators at least every 20 minutes.

MANUAL CLEARING

Figures 4-1 and 4-2 and Table 4-1 show an example of a team composition and equipment for a clearing operation. The sweep-team composition is subject to change due to personnel availability and the tactical situation. Figure 4-3, page 4-4, shows a sweep team in echelon. Table 4-2, page 4-5, shows a team organization for a route clearance.

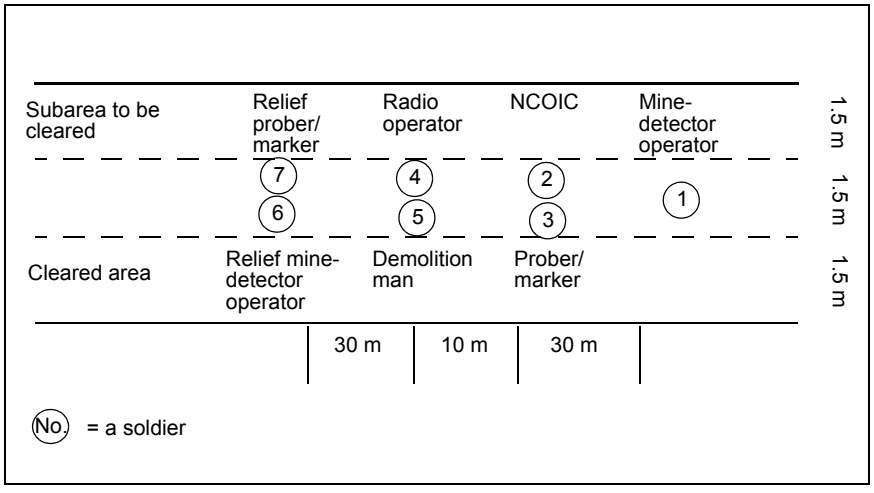

Figure 4-1. Squad-size sweep team

4-2 Mobility

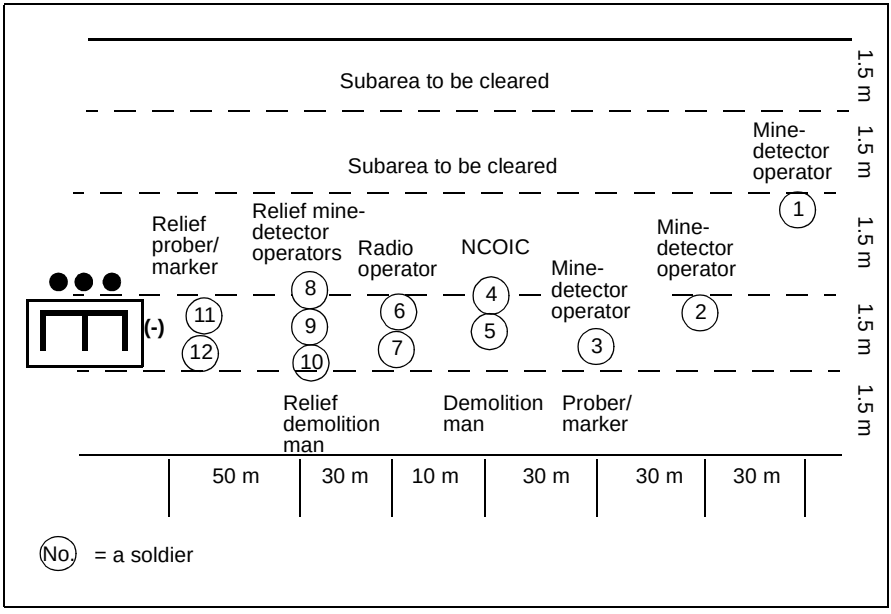

Figure 4-2. Platoon-size sweep team

Table 4-1. Personnel and equipment requirements for a sweep team

Personnel	Support Personnel	Equipment
• NCOIC • Mine-detector operator • Probers/markers • Radio operator • Demolition teams	• Medics • Vehicle operator	• One panel marker • Operational map with required maneuver graphics • Four smoke grenades (minimum) • Six mine detectors (includes three backups) and extra batteries • Two grappling hooks with 60 meters of rope each • One demolition kit or bag for each demolition man • Six probes • Mine-marking material

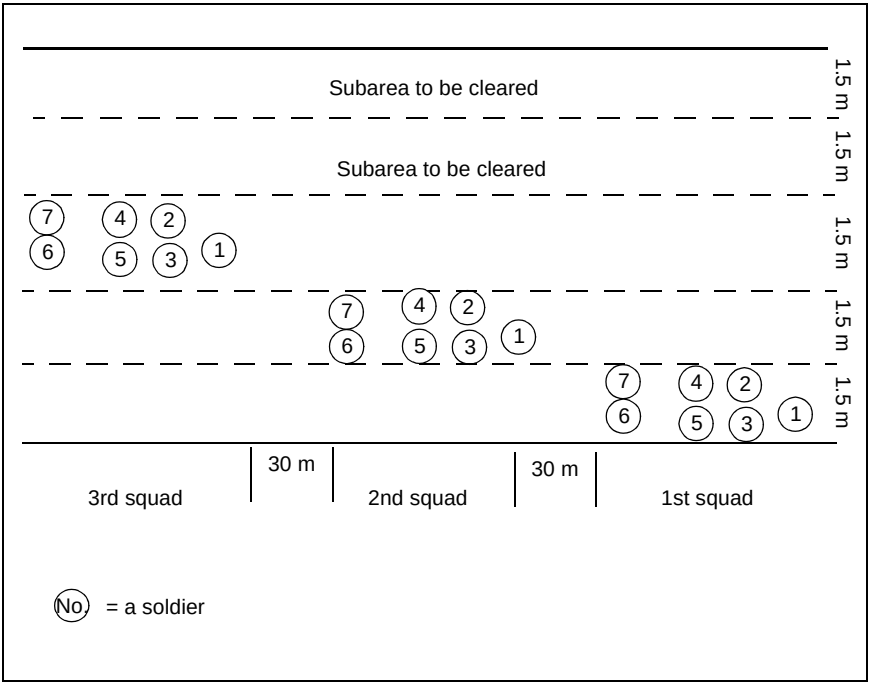

Figure 4-3. Sweep teams in echelon

Table 4-2. Route-clearance team organization

Team	Support Force	Assault Force	Breach Force
Heavy	• Mechanized infantry platoon with dismount capability • Armor platoon	• Mechanized infantry platoon • Engineer squad • Mortar section • Medical team (two ambulances) • PSYOP team • FIST	• Engineer platoon with organic vehicles • Armor platoon with plows and rollers
Light/heavy	Two infantry platoons (light)	• Bradley platoon with dismount capability • Engineer squad • 60-mm mortar section • Medical team (two ambulances) • PSYOP team • Forward observer	• Engineer platoon with organic vehicles • Armor platoon with plows and rollers
Light	Two infantry platoons (light)	• AT/MP section with M60/MK19 mix • 60-mm mortar section • Medical team (two ambulances) • PSYOP team • Forward observer	• Engineer squad (+) • Infantry platoon (light) • AT/MP section with M60/MK19 mix

the final drive (see Figure 9-26). If explosives are not available, destroy the AFV by using AT weapons or fire, or destroy the main gun with its own ammuntion. Insert and seat one round in the muzzle end and a second charge, complete with propellant charge (if required), in the breach end of the tube. Use a long lanyard and fire the gun from a safe distance. Make sure that the firing party is undercover before firing the gun.

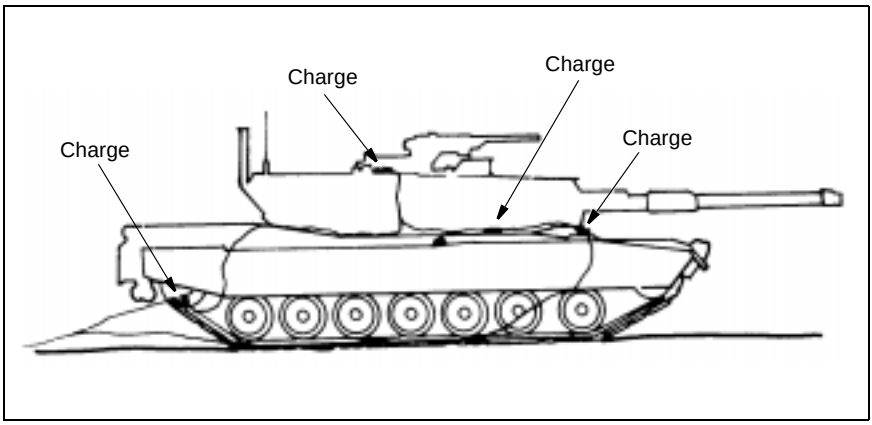

Figure 9-26. Placing charges on the AFV

WHEELED VEHICLES

Destroy wheeled vehicles by attacking the vital parts with explosives or even a sledge hammer. If you use explosives, place a 2-pound charge on the cylinder head, axles, and frame.

EXPEDIENT DEMOLITIONS

Expedient techniques are intended for use only by personnel experienced in demolitions and demolitions safety. Do not use expedient techniques to replace standard demolition methods.

CRATERING CHARGE

Cratering charges are used to supplement the 40-pound cratering charge or as an improvised cratering charge. To make a cratering charge—

- Use a mixture of ammonium-nitrate fertilizer (at least $33^{1}/_{3}$ percent nitrogen) and liquid (diesel fuel, motor oil, or gasoline) at a ratio of 25 pounds of fertilizer to 1 quart of liquid. Mix the fertilizer with liquid and allow it to soak for an hour.

- Pour half of the charge weight in a hole, place two 1-pound primed blocks of explosive, and then pour in the other half of the charge.
- Place the mixture inside of a sandbag or plastic bag or cardboard box, for transportation, and then place the entire package in the hole.

NOTE: Bore holes should receive 10 pounds of explosives for every foot of depth and must be dual-primed.

SHAPED CHARGE

- Use a container, such as a can, jar, bottle or drinking glass, and remove both ends (see Figure 9-27). (Some containers come with built-in cavity liners, such as champagne or cognac bottles, with the stems removed.)
- Place the plastic explosive inside the container, and mold a cone in the base of the explosive. If possible, use a cone-shaped liner made from copper, aluminum foil, or glass. The optimum angle for the cone is 42 to 45 degrees, but cavity angles between 30 and 60 degrees will work.
- Ensure that the standoff or legs of the container are $1^1/_2$ times the cone's diameter.
- Detonate the charge from the top dead center of the charge.

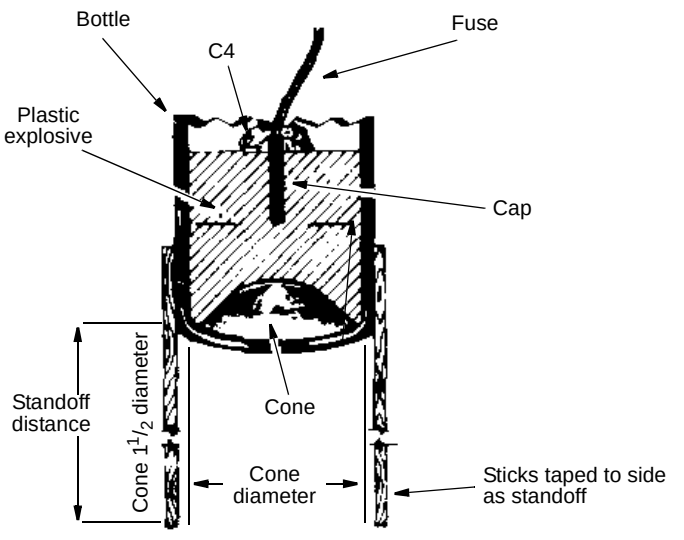

Figure 9-27. Shaped charge

PLATTER CHARGE

- Get a steel platter, preferably round, that weighs 2 to 5 pounds. Uniformly pack the explosive to the back of the platter.
- Make sure that the explosive weighs the same as the platter. You can tape the explosive to the platter.
- Prime the charge at the exact rear center. Cover the blasting cap with a small quantity of C4 if any part of the cap is exposed.
- Gut an M60 fuse igniter and tape it to the top of the charge as a sight. You can fabricate legs from sticks to help in aiming the platter. Make sure that the explosive is on the side of the platter opposite the target (see Figure 9-28).

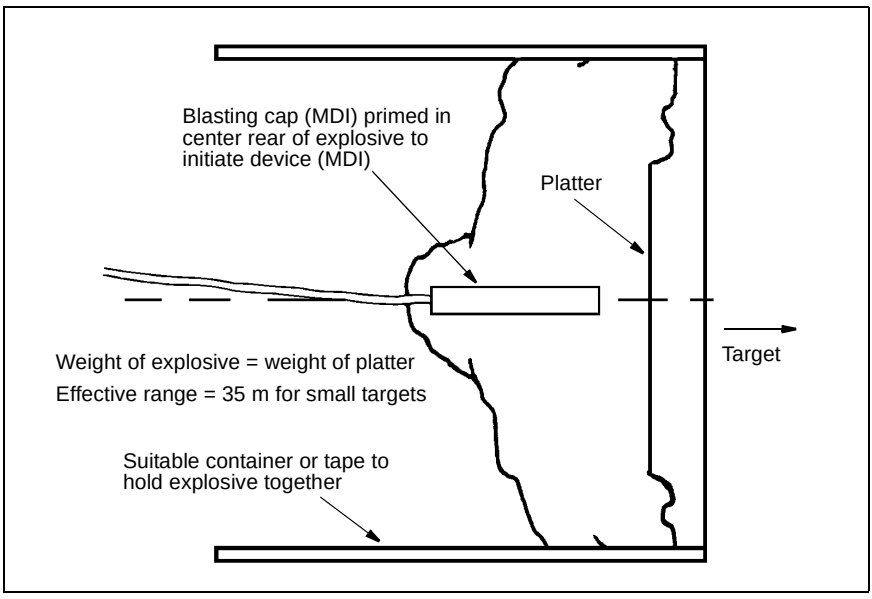
Blasting cap (MDI) primed in center rear of explosive to initiate device (MDI)
Platter
Target
Weight of explosive = weight of platter
Effective range = 35 m for small targets
Suitable container or tape to hold explosive together

Figure 9-28. Platter charge

GRAPESHOT CHARGE

- For a grapeshot charge (see Figure 9-29, page 9-50), get a container, projectiles, buffer material, an explosive charge, and detonating cord.
- Make a large enough hole in the center bottom of the container to accept the detonating cord.
- Slip the detonating cord branch line through the hole and tie a double overhand knot.
- Place and tamp the C4 uniformly in the bottom of the container.

- Place two inches of buffer material (leaves, dirt, cardboard) on top of the explosive. Place the projectiles (nails, bolts, rocks) on top of the buffer material and secure the opening of the container using tape or plastic wrap.

  NOTE: The United Nations Convention of Certain Conventional Weapons (CCW) mandates that all fragmentary munitions produce fragments that are visible by x-ray (metal, rock).

- Tie the detonating cord branch line to a line or ring main.
- Aim the charge at the center of the target from about 100 feet.

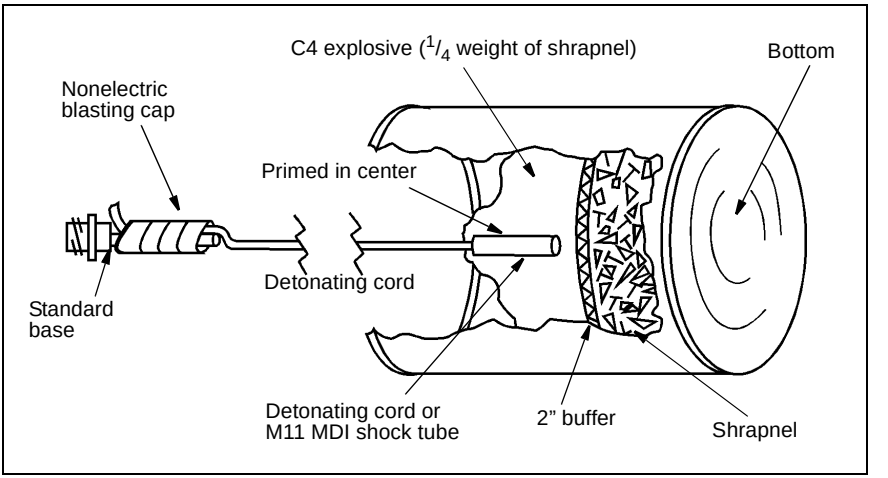

Figure 9-29. Grapeshot charge

AMMONIUM NITRATE SATCHEL CHARGE

This charge is a mixture of ammonium-nitrate fertilizer with melted wax instead of oil. The mixing ratio is four pounds of fertilizer to one pound of wax. To make this charge—

- Melt the wax in a container and stir in the ammonium-nitrate pellets, making sure that the wax is hot while mixing. Before the mixture hardens, add a $^1/_2$-pound block of explosive primed with detonating cord. Ensure that the primed charge is in the center of the mixture and that there is sufficient detonating cord available to attach initiation sets.
- Pour the mixture into a container. Add shrapnel material to the mixture if desired, or attach the shrapnel on the outside of the container to give a shrapnel effect. Detonate the charge by attaching intiation sets to the detonating cord coming from the satchel charge.

BANGALORE TORPEDO

- Separate the packaging material from C4 (M112), and place it in the concave portion of two *U*-shaped pickets which are not bent or damaged.
- Mold the C4 explosive, using a nonsparking tool, into the concave position that runs the entire length of the *U*-shaped pickets.
- Place a line of detonating cord, after tamping the C4, on top of the C4 of one of the pickets, and make a single overhand knot every 6 to 8 inches. Make sure the detonating cord runs several feet past the *U*-shaped picket length so that it can be tied into a firing system.
- Place the other *U*-shaped picket tamped with C4 onto the picket with the detonating cord previously set in. The C4 explosive from each picket will be touching, with the detonating cord in the middle.
- Secure the two *U*-shaped pickets together with tape or wire.

DETONATING-CORD WICK (BOREHOLE METHOD)

Use this method (see Figure 9-30, page 9-52) to enlarge boreholes in soil. You will get the best results in hard soil.

- Tape together several strands of detonating cord 5 to 6 feet long. Generally, one strand enlarges the diameter of the hole by about 1 inch. Tape or tie the strands together into a wick for optimum results.
- Make a hole by driving a steel rod about 2 inches in diameter into the ground to the depth required. According to the rule of thumb, a hole 10 inches in diameter requires 10 strands of detonating cord.
- Place the detonating-cord wick into the hole using an inserting rod or some other field expedient. The strands must extend the full length of the hole.
- Fire the cord either electrically or nonelectrically. An unlimited number of wicks can be fired at one time by connecting them with the detonating-cord ring main or line main. If you place successive charges in the holes, blow out excess gases and inspect the hole for excessive heat.

TIME FUSE

Soak length of clean string ($^1/_8$-inch diameter) in gasoline and hang to dry. After drying, store it in a tightly sealed container. Handle it as little as possible, and test it extensively before use.

GREGORY KNOT (BRANCH-LINE CONNECTION)

The Gregory knot (see Figure 9-31, page 9-52) is a detonating-cord knot tied at the end of a branch line to connect the branch line to a

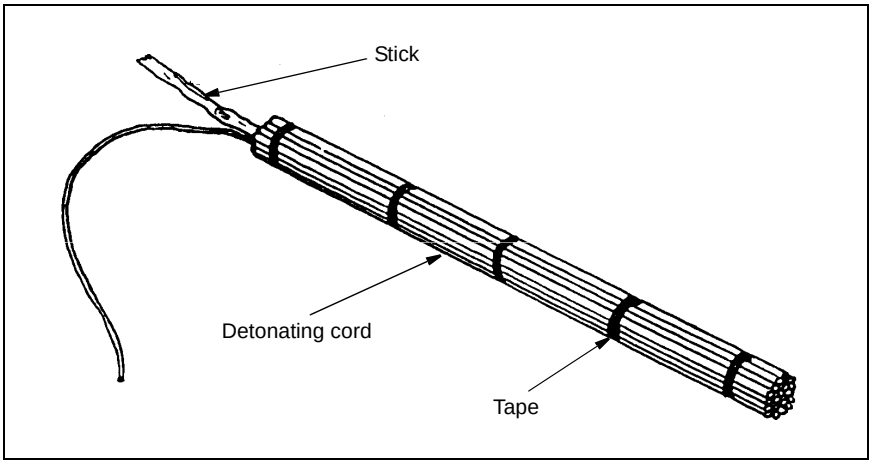

Figure 9-30. Detonating-cord wick

firing system. The Gregory knot saves time on a target when tied before arriving at the mission site. This knot does not take the place of the girth hitch with an extra turn or detonating-cord clips.

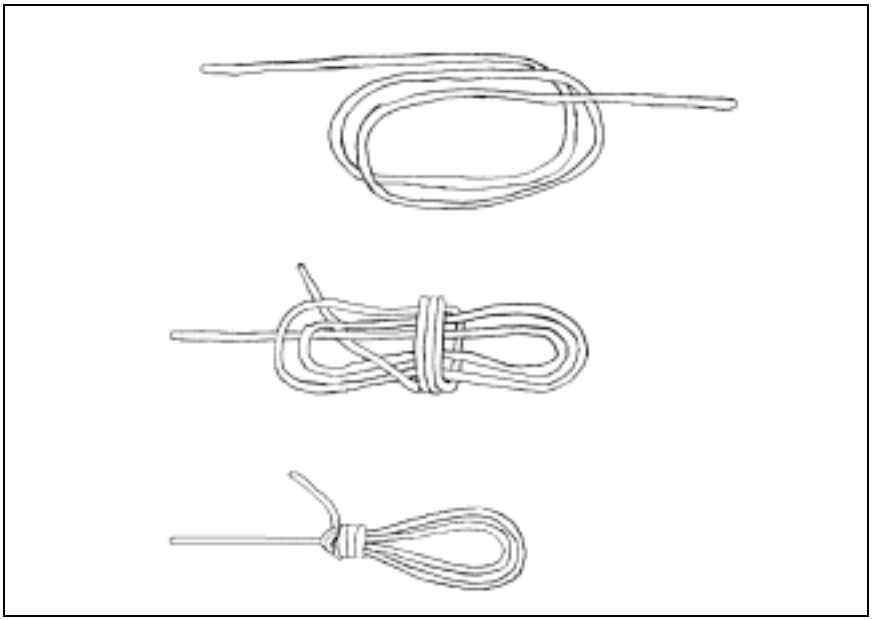

Figure 9-31. Gregory knot

SECTION II. MODERN DEMOLITION INITIATORS

MDI FIRING SYSTEMS

The MDI are a family of nonelectric blasting caps and associated items (see Table 9-12, page 9-54). The snap-together components simplify initiation systems and some types of explosive priming. The MDI was developed to effectively replace electric demolition systems. The MDI system removes the requirement to dual-initiate demolition systems except when there is a high probability of the system becoming cut.

Nonelectric priming with MDI is safer and more reliable than the current nonelectric priming methods. MDI blasting caps are factory-crimped to precut lengths of shock tube or time-blasting fuse. Because the caps are sealed units, they are moisture-resistant and will not misfire in damp conditions. A shock tube may be spliced using excess shock tube from an M12 or M13 or a precut splicing-tube splicing kit. Every splice in a shock tube reduces the reliability of the priming system. Prime military explosives with the MDI the same as with standard, nonelectric initiation systems. Use only high-strength MDI blasting caps (M11, M14, M15) to prime explosive charges. M12 and M13 relay-type blasting caps do not have sufficient power to detonate most explosives. You can use all MDI blasting caps to initiate a shock tube. Use only the M11, M14, or M15 blasting caps to initiate detonating cord or military explosives directly.

WARNING
Use care when cutting and splicing the shock tube. When cutting the shock tube, always tie and overhand knot in the left over shock tube.

With the introduction of MDI components, there will be two types of firing systems: a stand-alone firing system and a combination firing system. Both systems can be emplaced as single- or dual-firing systems. The choice of which system to use for a particular demolition mission is left to the experience of the engineer commander. However, the combination firing system is the preferred method for reserved demolition targets. See FM 5-250, Chapter 7, for detailed instructions on both systems.

Table 9-12. MDI components

Components	Description	Packaging
M11	High-strength, nonelectric blasting cap, factory crimped to a 30-ft length of shock tube—used to prime all standard military explosives, including det cord, or to initiate the shock tube of other MDI blasting caps. A red flag is attached 1 meter from the cap, and a yellow flag is attached 2meters from the cap.	6/pkg, 10 pkg per box
M12	Low-strength, nonelectric blasting cap[1], factory crimped to a 500-ft length of shock tube—used as a transmission line from an initiator to another relay cap or to a high-strength, shock-tube blasting cap which initiates military explosives. Can actuate up to five shock tubes held by the connector.	8 spools/ cardboard box, 6 boxes/packing box
M13	Low-strength, nonelectric blasting cap[1], factory crimped to a 1,000-ft length of shock tube; used as a transmission line from an initiator to another relay cap or to a high-strength, shock-tube blasting cap which initiates military explosives. Can actuate up to five shock tubes held by the connector.	4 spools/ cardboard box, 6 boxes/packing box
M14	High-strength, nonelectric, delay blasting cap, factory crimped to a 7 1/2-ft length of time-blasting fuse—instead of the usual yellow band every 18 in, a marker band and the minimum burning time in minutes (from the band to the detonator) are marked on the fuse. Used to detonate all standard military explosives or initiate shock-tube blasting caps and detonating cord about 5 minutes after being ignited.	1/pkg, 60/ wooden box
M15	Nonelectric blasting cap, delay[2] —consists of two blasting caps, factory crimped at each end of a 70-ft length of shock tube. One blasting cap is low-strength to initiate another piece of shock tube, while the second is high-strength to initiate other explosives. A red flag is attached 1 meter from the high-strength blasting cap, and a yellow flag is attached 2 meters from the low-strength cap. Used to create staged detonations, as required for quarrying, ditching, and cratering operations.	30/box, 4 boxes/packing box
M9	Blasting cap and shock tube holder—clamping device used to hold the shock tube's branch lines secure to a high-strength blasting cap of the M11 or M14. Can hold up to five shock tubes and one blasting cap. Can also connect a MDI blasting cap to detonating cord.	
M81	Time-blasting fuse igniter with shock-tube capability—M81 and M60 fuse igniters are almost identical except the plug and screw end cap are colored black on the M81.[3]	5/paperboard box/ pkg, 6 pkg/ wooden box

NOTE: The M81 has a stronger primer than the M60

[1]Does not have enough output to initiate most military explosives.

[2]Blasting caps are slightly larger than standard military blasting caps and will not fit into standard cap wells.

[3]The M60 fuse igniter will not reliably initiate the shock tube.

STAND-ALONE SYSTEM

The stand-alone firing system is one in which the initiation sets and transmission and branch lines are constructed using only MDI components and the explosive charges are primed with MDI blasting caps. It is important to ensure that the firing system is balanced. All charges must have the same distance in shock-tube length from the firing point to the charge. Figure 9-32 shows the single-firing MDI system; Figure 9-33, page 9-56, shows the dual-firing MDI system; and Figure 9-34, page 9-56, shows a branch-line array.

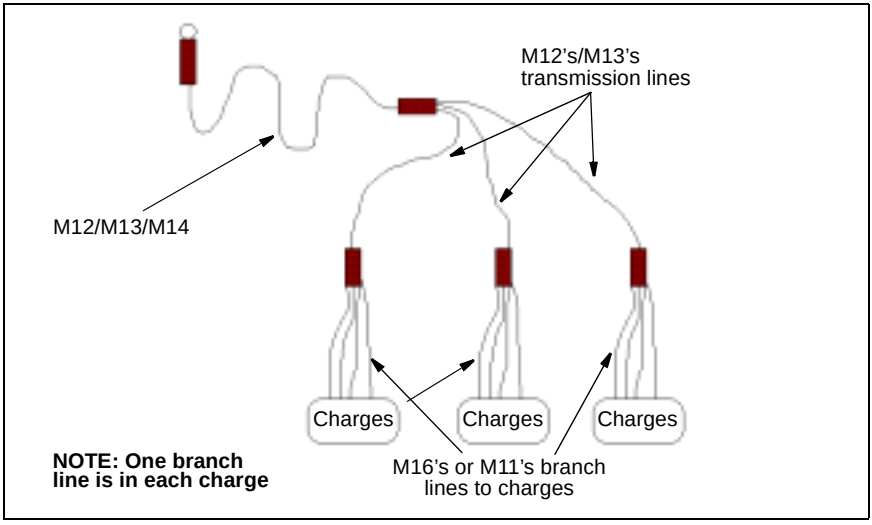

Figure 9-32. MDI single-firing system (single-primed)

The disadvantage of a single-firing system is that if the transmission line is cut, any charges down line from the cut will not detonate. If there is a possibility of the transmission lines being cut (for example, through artillery fires) a second firing system should be added as shown in Figure 9-33. Note that the charges in this case are now dual-primed, the transmission line is laid in the opposite direction of the first transmission line, and the system is a balanced system.

CAUTION

When making multi-shock-tube installations, take care to protect the shock tubes from the effects of nearby relay caps and charges. The shrapnel produced by a cap or charge could easily cause a (partial or complete) misfire. When there are many shock tubes involved in a shot, place them carefully away from the junction.

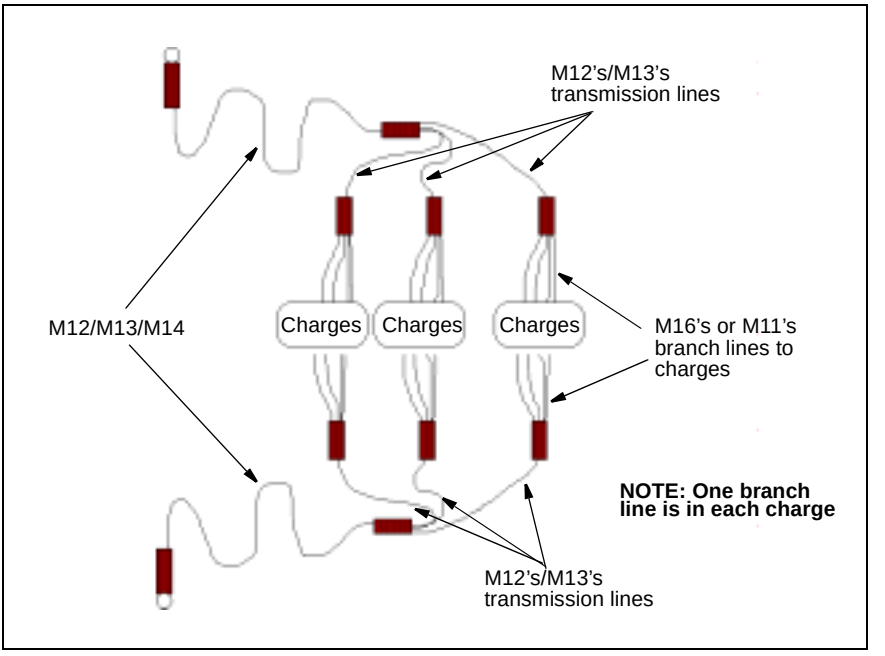

Figure 9-33. MDI dual-firing system (dual-primed)

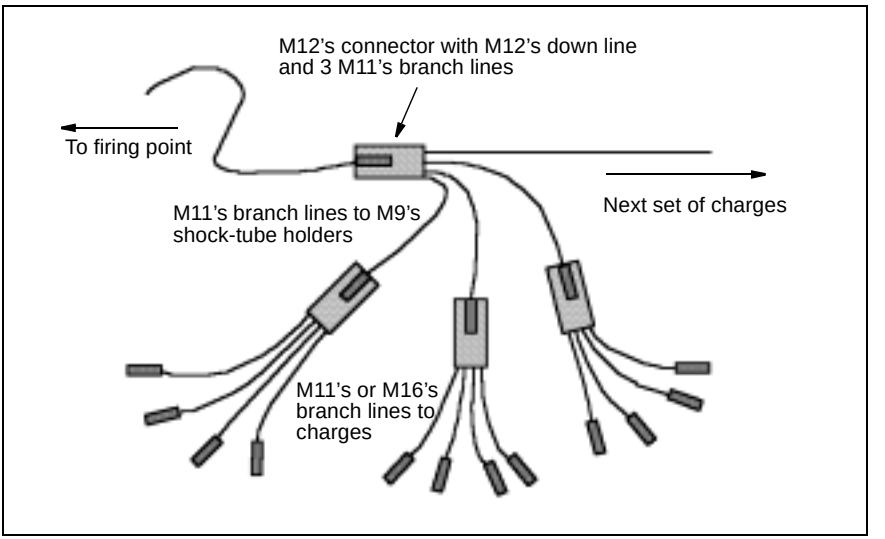

Figure 9-34. M11's or M16's branch-line array

Use the stand-alone MDI firing system for all types of demolition missions, including bridge demolitions. The MDI firing system can be used to initiate reserved demolition targets. However, under

current internationally agreed upon doctrine, charges cannot be primed with blasting caps until a change of readiness from state 1 (safe) to state 2 (armed) is ordered. Priming every charge with MDI blasting caps at this critical moment would take a considerable amount of time and be unacceptable to the maneuver commander. Priming charges with detonating cord is the preferred method on reserved demolition targets.

COMBINATION FIRING SYSTEM

A combination firing system is one which consists of the MDI initiation set; either a detonating-cord line or ring main; and branch lines that can be either MDI, detonating cord, or a mix of both. Figure 9-35 shows a combination firing system.

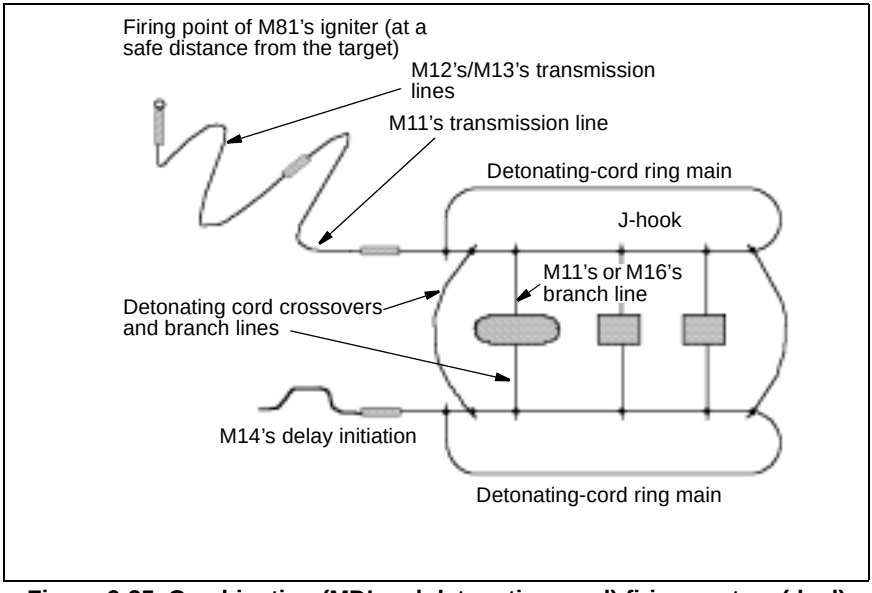
Firing point of M81's igniter (at a safe distance from the target)
M12's/M13's transmission lines
M11's transmission line
Detonating-cord ring main
J-hook
M11's or M16's branch line
Detonating cord crossovers and branch lines
M14's delay initiation
Detonating-cord ring main

Figure 9-35. Combination (MDI and detonating cord) firing system (dual)

Use the combination (MDI and detonating cord) firing system for all types of demolition missions. It combines the advantages of MDI components with the simplicity and flexibility of detonating cord. The combination firing system is the preferred method for reserved

demolition targets, underwater operations, and operations where subsurface-laid charges are used.

WARNING
Do not dispose of used shock tubes by burning them because of potentially toxic fumes given off from the burning plastic.

SPLICING THE SHOCK TUBE

The MDI are extremely reliable because all of the components are sealed. Unlike standard nonelectric priming components, they cannot be easily degraded by moisture. Cutting the shock tube makes the open ends vulnerable to moisture. Dampening the explosive film on the inside of the shock tube will stop a detonation from going beyond such a damp spot. Use care when cutting and splicing the shock tube. When cutting the shock tube, always tie an overhand knot in the leftover shock tube. Use splicing to repair a break in the shock tube of a transmission or branch line (caused, for example, by shrapnel from artillery fires) or to extend the shock tube of another MDI blasting cap, but only when necessary. This is done by using excess shock tube from an M12's or M13's shock-tube blasting cap when the entire length is not needed. Every splice in the shock tube reduces the reliability of the firing system. Keep the number of splices in a shock-tube line to as few as practicable. Unless splicing is absolutely necessary, use of a full, sealed MDI component is recommended. (Do not splice the shock tube while conducting water or diving demolition missions).

CAUTION
Taping two cut ends of the shock tube together does not make a reliable splice.

SAFETY PROCEDURES

When conducting training and missions with MDI, follow the general safety considerations for demolitions as given in Chapter 6 and AR 385-63.

Because MDI components are delivered from the factory precrimped, they are more reliable and safer to handle and use than the current standard military blasting caps. During testing of the MDI components, it was found that the blasting caps would always function correctly if the shock tube was properly initiated. Misfires only occurred when the—

- M81 fuse igniter was not properly connected to the shock tube before initiation.

- Shock tube was cut by shrapnel during the initiation process.
- Shock tube was incorrectly inserted into the holders on the M12 or M13 blasting caps or into the M9 holder.
- Shock tube was cut using crimpers.

WARNING
MDI is not authorized for below-ground or internal charges.

When transporting or storing MDI blasting caps, do not mix them with other explosives. Transporting blasting caps requires special consideration. The caps must be placed in a suitable container or in a separate vehicle.

MDI MISFIRE CLEARING PROCEDURES

- In most misfires of the shock-tube blasting caps, which are nonelectric, apply the standard rules.
- If the primer in the M81 does not fire (the most common problem), recock the M81 by pushing in on the pull rod to reset the firing pin, and then actuate the igniter again. If two or three retries result in a nonfiring, cut the shock tube, replace the igniter with a new one, and repeat the firing procedure.
- If the M81 fires and blows the shock tube out of its securing mechanism without it firing, cut about 3 feet from the end of the shock tube, replace with a new igniter, and repeat the firing procedure.
- If the M81 appears to have functioned properly but the charge did not fire, cut a 1-foot section from the shock tube starting 6 inches from the igniter. Hold the 1-foot piece of shock tube so one end is over your palm; gently blow through the other end. If a fine powder comes out from the shock tube, it has not fired. Install a new igniter on the freshly cut end of the priming shock tube and repeat the firing procedure. If no fine powder comes out from the shock tube or the shock tube was heard to fire or its flash was seen, wait for 30 minutes before moving downrange to check the components in the firing system.
- After waiting 30 minutes, proceed downrange and check all components in the firing system. The most likely cause of a misfire is the incorrect placement of the shock tube in the plastic connectors of the M12/13s or the M9 holder. If incorrect placement was the problem, replace the fired section and properly connect and refire the device.

- If the first component of the firing train did not fail, check out each succeeding component until you find the one that failed. Replace the failed or fired relay components back to the initiating site and refire.
- If the final high-strength blasting cap seems to be the failed component, replace it if it is easily accessible. However, if it is used to prime an explosive charge, do not disturb it. Place a new, primed 1-pound explosive charge next to the misfired charge and detonate it when it is safe.

KNOTS AND ATTACHMENTS

Table 12-4. Knots

Group	Knot	Purpose
Knots at the end of a rope	Overhand	For preventing the end of a rope from untwisting, forming a knob at the end of a rope, or serving as a part of another knot
	Figure eight	For forming a larger knot at the end of a rope than would be formed by an overhand knot
	Wall	For preventing the end of a rope from untwisting when an enlarged end is not objectionable
Knots for joining two ropes	Square	For tying two ropes of equal size together so they will not slip
	Single sheet bend	For tying together two ropes of unequal size or tying a rope to an eye
	Double sheet bend	For tying together two ropes of equal or unequal size requiring more holding power than that of the single sheet bend, tying wet ropes together, or tying a rope to an eye
	Carrick bend	For heavy loads and for joining large hawsers of heavy rope
Knots for making loops	Bowline	For lowering men and material
	Double bowline	For slinging a man
	Running bowline	For tying a handline around an object you cannot safely reach, such as the end of a limb
	Bowline on a bight	For the same purpose as a boatswain's chair; use it when— •You need more strength than a single bowline will give. •You need to form a loop at some point in a rope other than at the end. •You do not have access to the end of a rope.
	Spanish bowline	For use in rescue work or for giving a twofold grip for lifting a pipe or other round object in a sling
	French bowline	For use as a sling to lift an injured man or when working alone and you need your hands free
	Spier	For use when you need a fixed loop, a non-slip knot, and a quick release
	Cat's paw	For fastening an endless sling to a hook, or making it at the end of a rope to fasten the rope to a hook
	Figure eight with an extra turn	For tightening a rope
Knots for tightening a rope	Butterfly	For pulling taught a high line, handline, tread rope for foot bridges or similar installations
	Baker bowline	For the same purpose as the butterfly knot and for lashing cargo

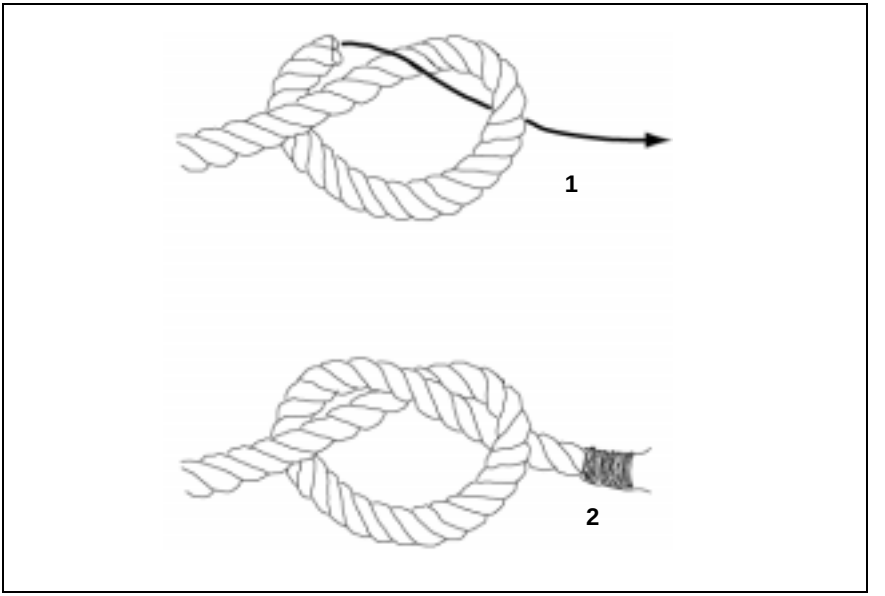

Figure 12-1. Overhand knot

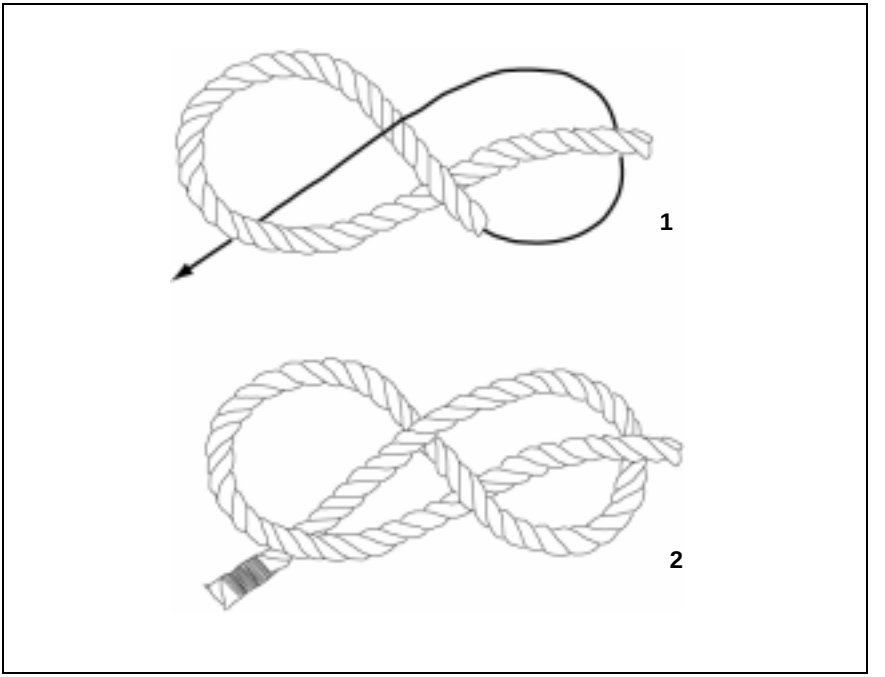

Figure 12-2. Figure-eight knot

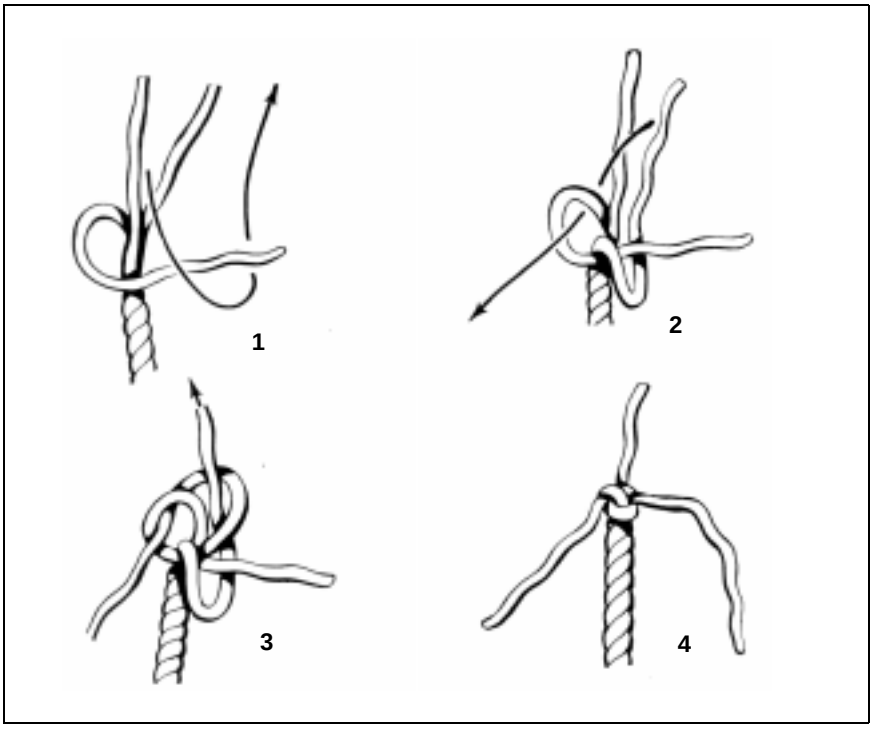

Figure 12-3. Wall knot

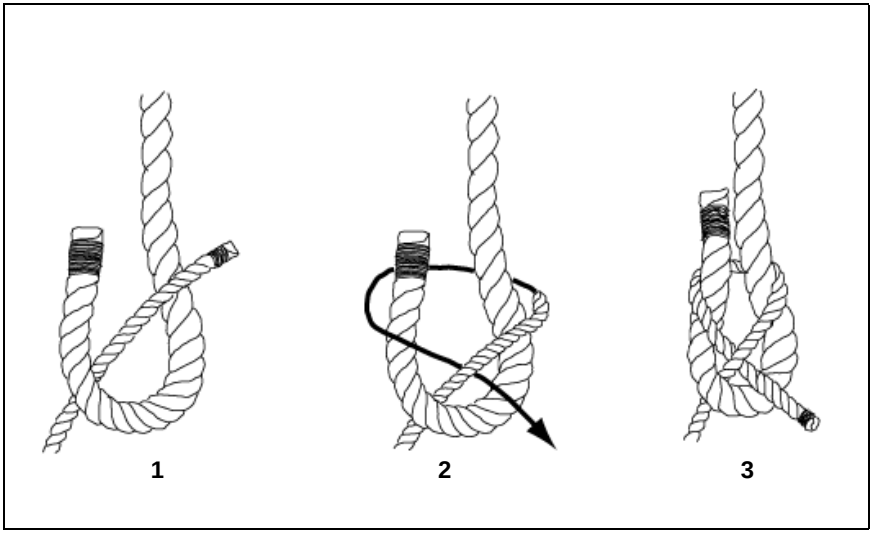

Figure 12-4. Single sheet bend

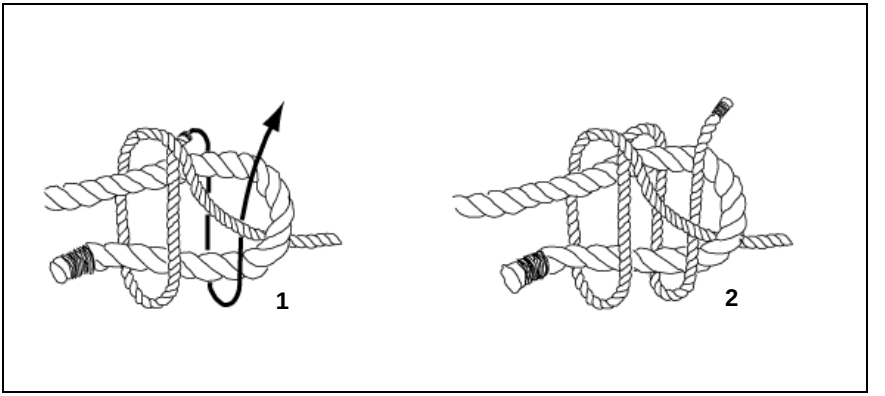

Figure 12-5. Double sheet bend

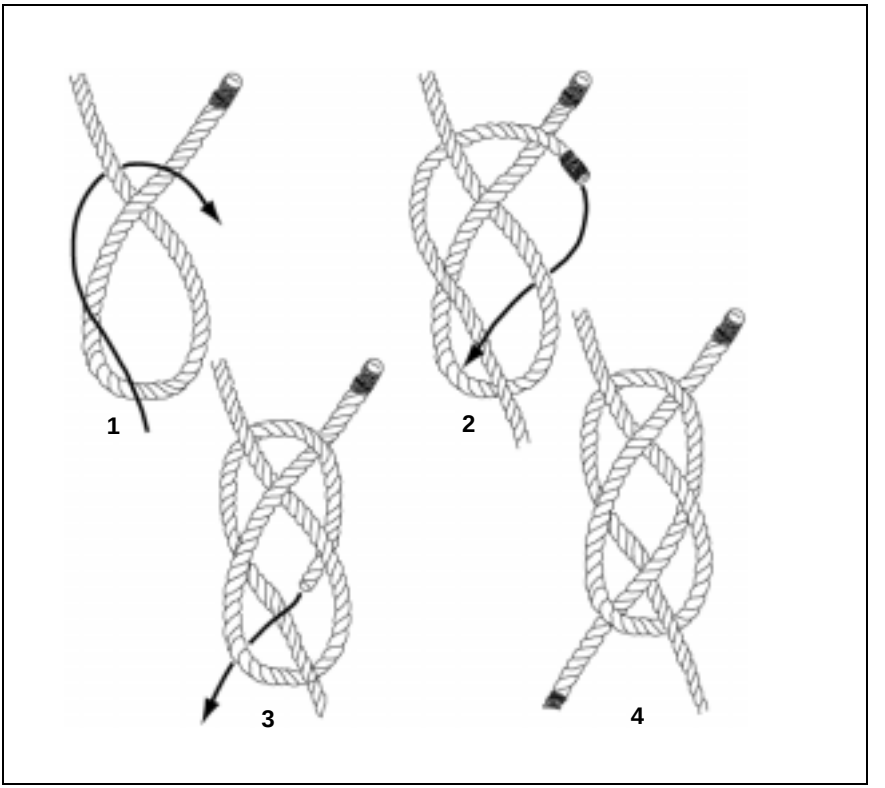

Figure 12-6. Carrick bend

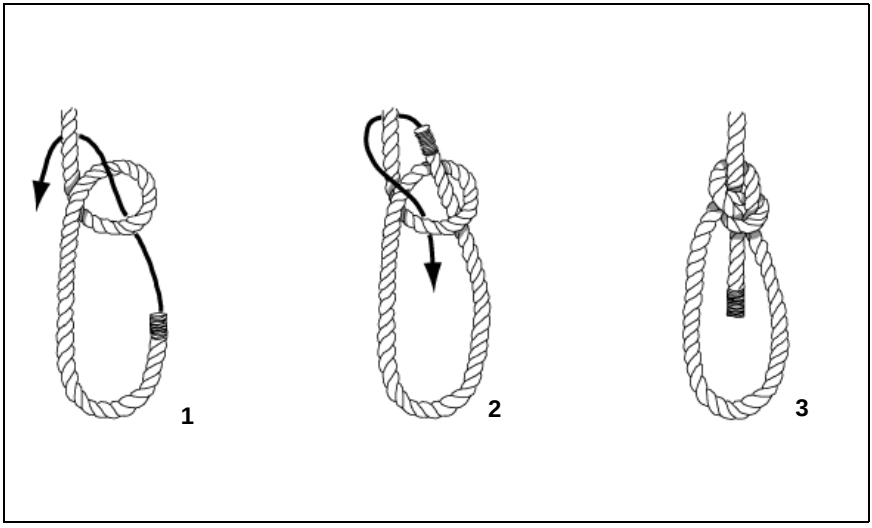

Figure 12-7. Bowline

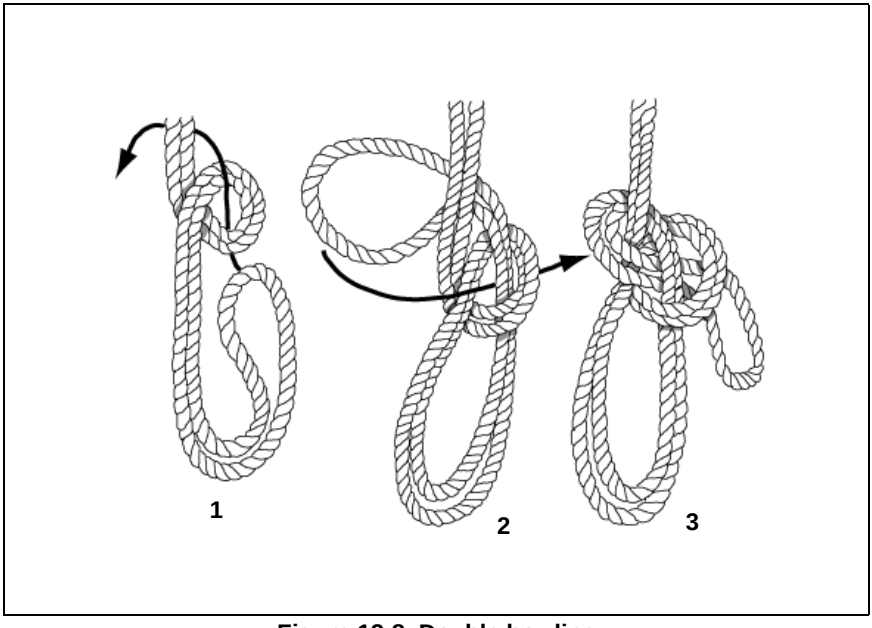

Figure 12-8. Double bowline

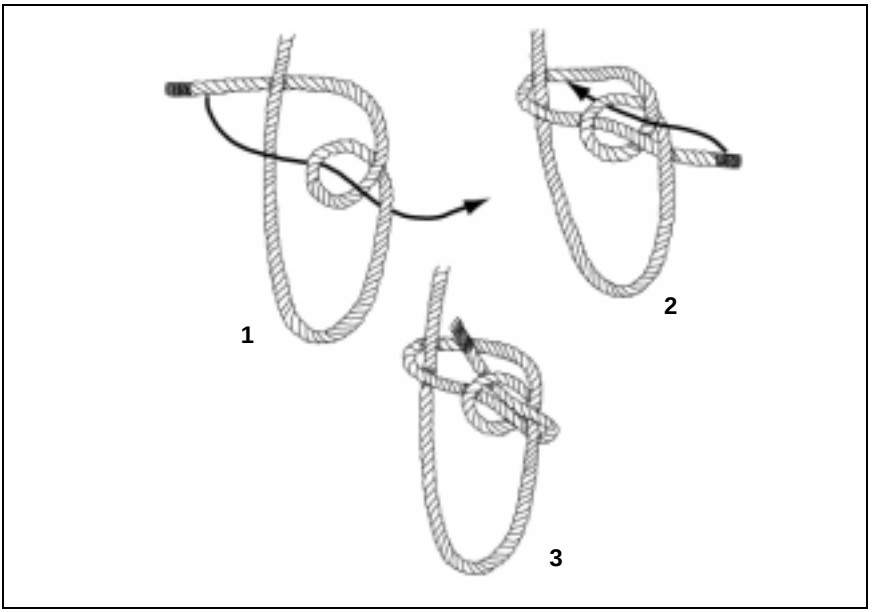

Figure 12-9. Running bowline

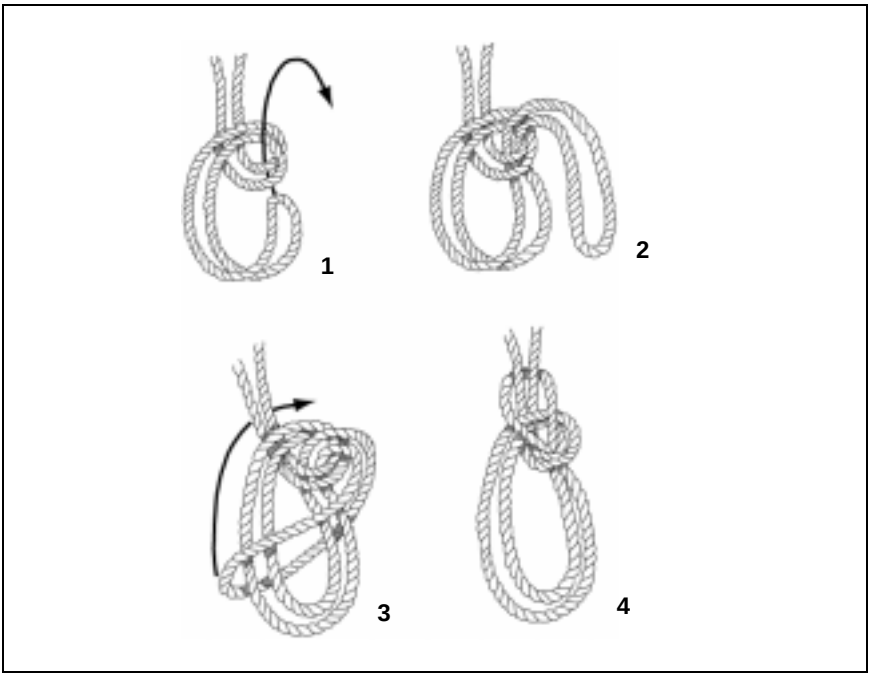

Figure 12-10. Bowline on a bight

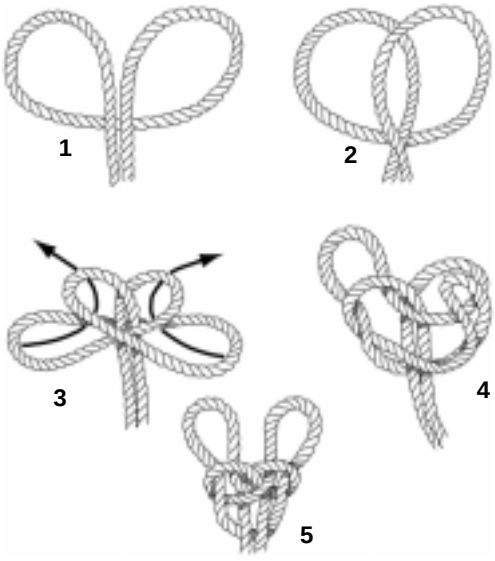

Figure 12-11. Spanish bowline

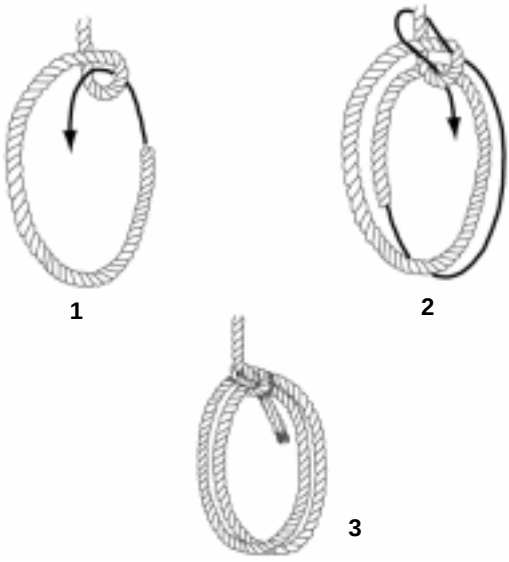

Figure 12-12. French bowline

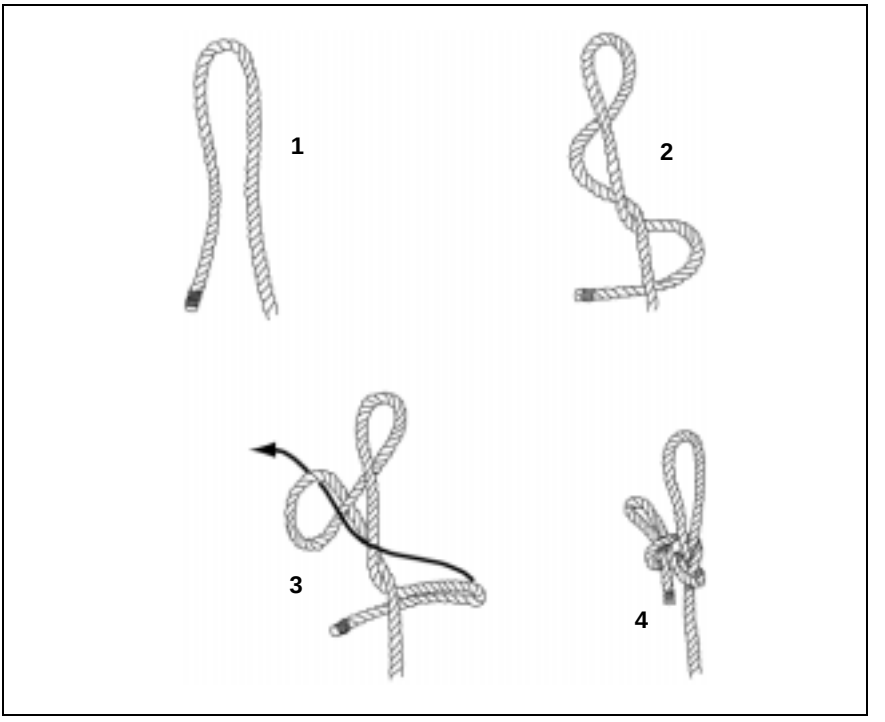

Figure 12-13. Speir knot

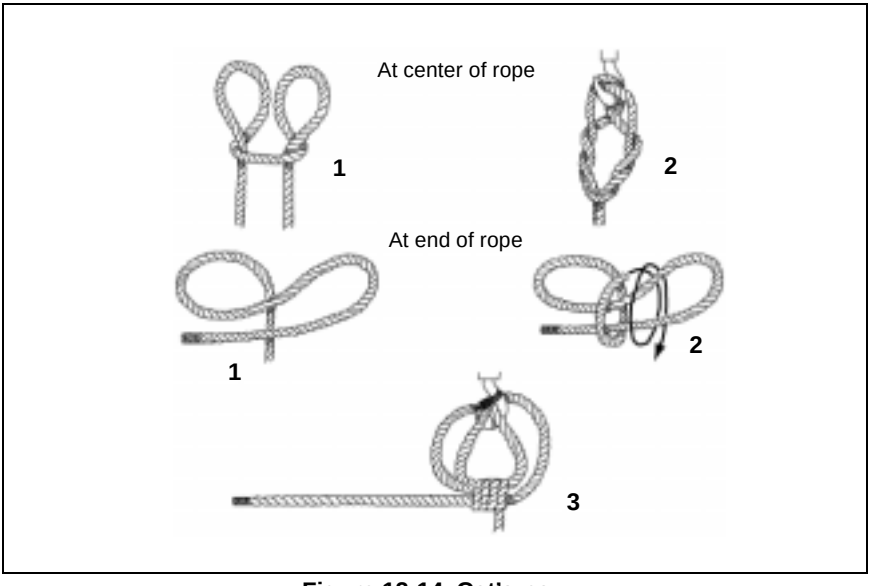

Figure 12-14. Cat's-paw

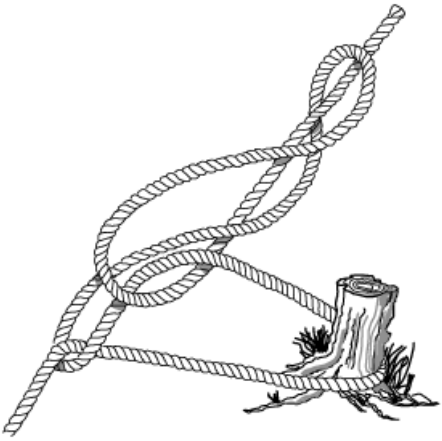

Figure 12-15. Figure eight with an extra turn

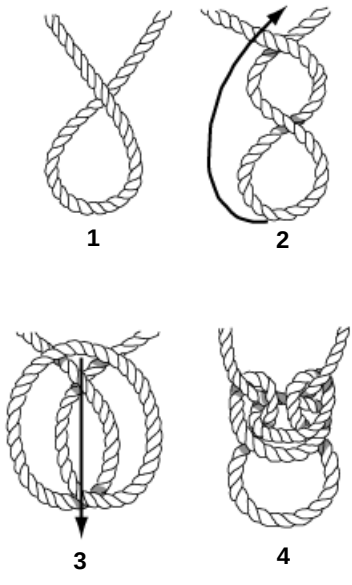

Figure 12-16. Butterfly knot

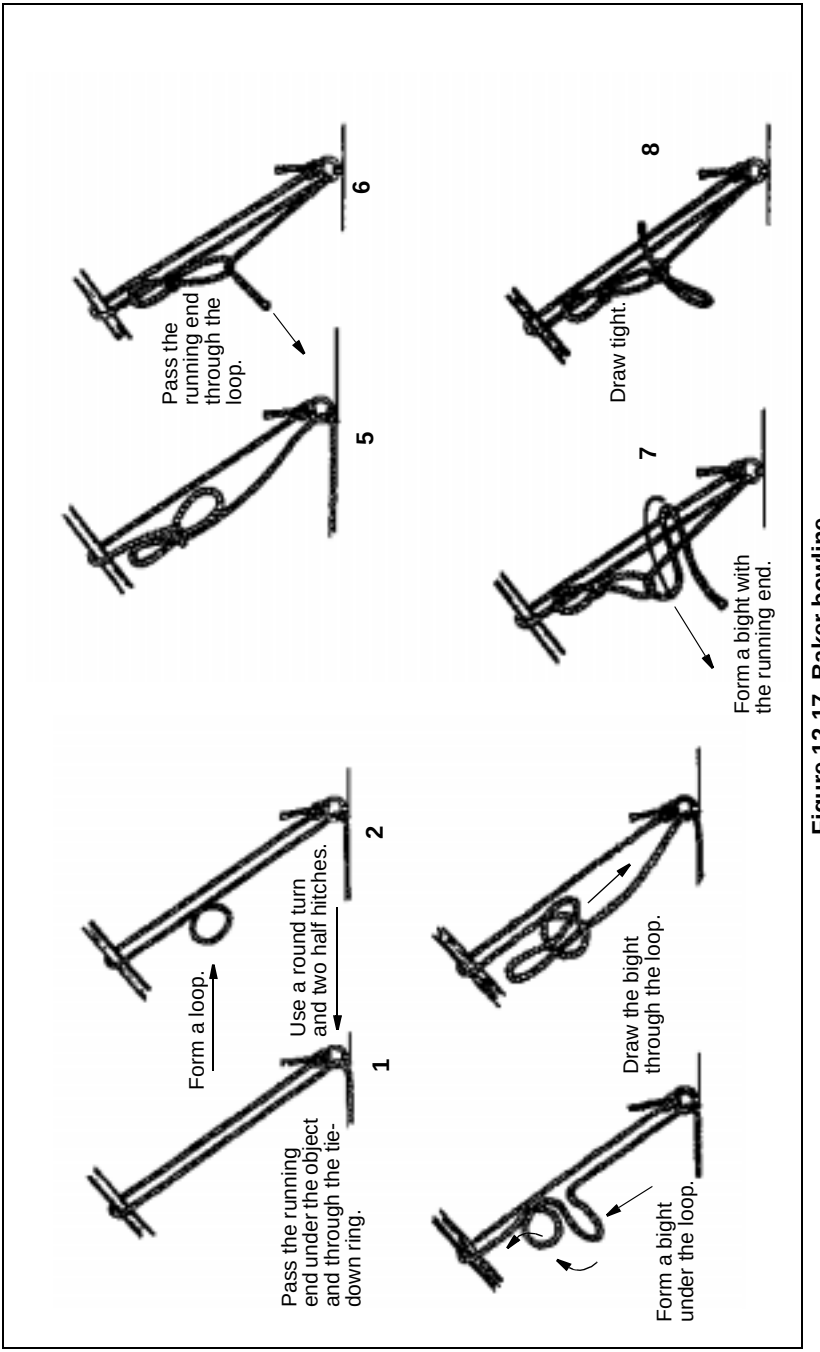
Pass the running end under the object and through the tie-down ring.
1
Form a loop.
Use a round turn and two half hitches.
2
Form a bight under the loop.
Draw the bight through the loop.
Form a bight with the running end.
7
Draw tight.
8
Pass the running end through the loop.
5
6

Figure 12-17. Baker bowline

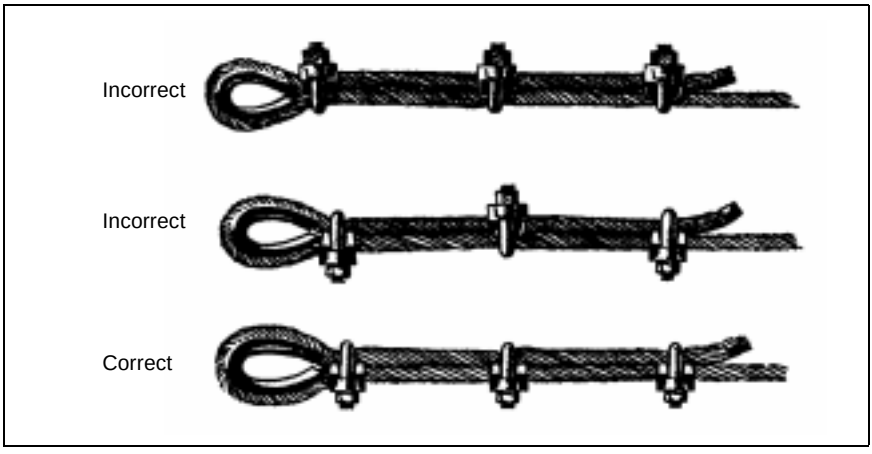

Figure 12-18. Wire-rope clips

Table 12-5. Assembling wire-rope eye-loop connections

Wire-Rope Diameter		Nominal Size of Clips (in)	Number of Clips	Spacing of Clips		Torque to be Applied to Nuts of Clips	
(in)	(mm)			(in)	(mm)	(ft–lb)	(m–kg x 0.1382)
5/16	7.95	3/8	3	2	50	25	3.5
3/8	9.52	3/8	3	2 1/4	57	25	3.5
7/16	11.11	1/2	4	2 3/4	70	40	5.5
1/2	12.70	1/2	4	3	76	40	5.5
5/8	15.85	5/8	4	3 3/4	95	65	9.0
3/4	19.05	3/4	4	4 1/2	114	100	14.0
7/8	22.22	1	5	5 1/4	133	165	23.0
1	25.40	1	5	6	152	165	23.0
1 1/4	31.75	1 1/4	5	7 1/2	190	250	35.0
1 3/8	34.92	1 1/2	6	8 1/4	210	375	52.0
1 1/2	38.10	1 1/2	6	9	230	375	52.0
1 3/4	44.45	1 3/4	6	10 1/2	267	560	78.0

Note: Clip spacing should be six times the diameter of the wire rope. To assemble an end-to-end connection, increase the number of clips indicated above by two. Use the proper torque indicated above on all clips. Reverse the *U*-bolts at the center of connection so that they are on the dead end (reduced load) of each wire rope.

ROPE BRIDGES

ONE-ROPE BRIDGE

Construct a one-rope bridge using a 36 1/2-meter rope; however do not bridge obstacles that exceed 20 meters with that rope length. Anchor the rope with an anchor knot (round turn with two half hitches) on the far side of the obstacle, and tie it off at the near end with a tightening system.

You can build a one-rope bridge in many ways, depending on the tactical situation and area you are to cross. (For example, if you cross a gorge above a treeline, you may have to emplace artificial anchors.) Regardless, all one-rope bridges require similar elements for you to emplace safely:

- Two suitable anchors.
- Good loading and unloading platforms.
- One rope about 1-meter high for loading and unloading.
- A tightening system.
- A rope tight enough for ease of crossing.

The technique you use will determine on which side you place the tightening system and whether you use an anchor knot or a retrievable bowline (see Figure 12-19).

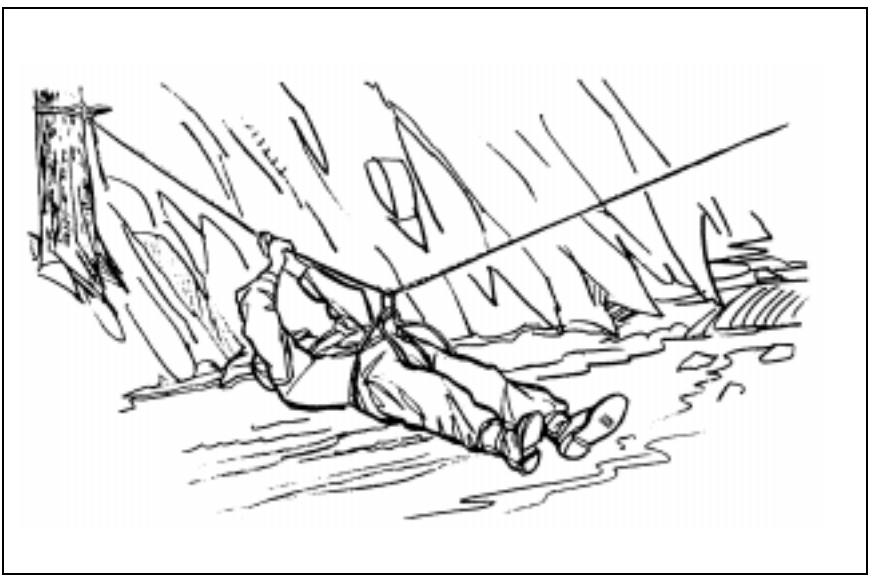

Figure 12-19. One-rope bridge

TWO-ROPE BRIDGE

Construct a two-rope bridge (see Figure 12-20) the same as a one-rope bridge except use two ropes. Space the ropes about 1 $^{1}/_{2}$ meters apart at the anchor points. The two-rope bridge is ideal for a platoon-size element. This bridge, however, does requires more time and equipment to construct than the one-rope bridge:

- Two climbing ropes.
- Two snaplinks.
- Seven soldiers for construction.
- One sling rope and two snaplinks for those using the bridge.

NOTE: Construct the top rope using any transport-tightening-system technique.

Figure 12-20. Two-rope bridge

FM 3-19.30

(Formerly FM 19-30)

Physical Security

Headquarters, Department of the Army

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Appendix H

Bombs

Terrorists have frequently used homemade devices or IEDs to carry out their attacks against DOD personnel, facilities, and assets. The IEDs are ideal terrorist weapons. They are relatively inexpensive to make, and the components of many IEDs are common items that can be obtained from many sources and are difficult to trace. The IEDs can be large or small and be designed so that they are transported to the attack site in components for last-minute assembly. Such design concepts make detection more difficult and provide an additional increment of personal safety to the terrorists.

GENERAL

H-1. The use of IEDs can enhance the violence that gives terrorist groups their ability to intimidate or coerce a target population. The detonation itself creates a highly visual, newsworthy scene, even hours after the detonation occurs. Bombs can detonate anywhere, without apparent reason and without warning. The use of bombs in a terror campaign emphasizes the authorities' inability to safeguard the public and maintain law and order. Bombs are ideal weapons because they can be designed to give terrorists opportunities to escape from the scene of their crimes.

CONCEALING BOMBS

H-2. Given the question, "Where have terrorists placed bombs in the past, and where should we look for them?" results in no easy answer. Table H-1, page H-2, lists a few obvious locations that should be examined. Terrorists who use bombs as their weapons of choice can be very creative in designing and placing their weapons.

H-3. Bombs can be found anywhere people can place them. Without becoming paranoid and seeing a bomb under every rock and behind every tree, the practical answer to the above questions is: "Where they can be easily placed without the bomber being caught."

DAMAGE AND CASUALTY MECHANISMS

H-4. The IEDs and other explosive devices inflict casualties in a variety of ways, including the following:

- Blast over pressure (a crushing action on vital components of the body; eardrums are the most vulnerable).
- Falling structural material.
- Flying debris (especially glass).
- Asphyxiation (lack of oxygen).

Table H-1. Potential IED Hiding Places

Outside Areas	
• Trash cans	• Street drainage systems
• Dumpsters	• Storage areas
• Mailboxes	• Parked cars
• Bushes	
Inside Buildings	
• Mail parcels or letters	• Restrooms
• Inside desks/storage containers	• Trash receptacles
• Ceilings with removable panels	• Utility closets
• Areas hidden by drapes or curtains	• Boiler rooms
• Recent repaired/patched segments of walls, floors, or ceilings	• Under stairwells
In Plain Sight	

- Sudden body translation against rigid barriers or objects (being picked up and thrown by a pressure wave).
- Bomb fragments.
- Burns from incendiary devices or fires resulting from blast damage.
- Inhalation of toxic fumes resulting from fires.

H-5. It is impossible to calculate a single minimum safe distance from an IED or other explosive device. The safe distance varies with each device and its placement. As a rule, the farther away from a bomb, the safer the intended or collateral targets are. Blast effects, fragmentation injuries, and injuries resulting from flying debris diminish greatly as the distance between a bomb and possible targets increase. The amount of material in the device, the type of explosive material, the manner in which the device is constructed, and the location or the container in which it is placed all have a bearing on the specific destructive potential for each IED.

H-6. The following are four general rules to follow to avoid injury from an IED:

- Move as far from a suspicious object as possible without being in further danger from other hazards such as traffic or secondary sources of explosion (such as POL storage).
- Stay out of the object's LOS, thereby reducing the hazard of injury because of direct fragmentation.
- Keep away from glass windows or other materials that could become flying debris.
- Remain alert for additional or secondary explosive devices in the immediate area, especially if the existence of a bomb-threat evacuation assembly area has been highly publicized.

H-7. Some terrorists have used two especially devious tactics in the past to intensify the magnitude of casualties inflicted by bombing attacks. In some instances, they have detonated a small device to lure media attention and curiosity seekers to the site; a larger, more deadly device has detonated some time after the first device, thereby inflicting a large number of casualties.

H-8. Other terrorists have used a real or simulated device to force the evacuation of a facility only to detonate a much more substantial device in identified bomb-threat evacuation assembly areas. These attacks are especially harmful because the evacuation assembly areas often concentrate government or commercial office workers more densely than they are when dispersed throughout their usual workplaces.

TELEPHONIC THREATS

H-9. When receiving a telephonic threat, treat the call seriously. Often, an anonymous telephone call is made regarding a bomb or an IED. See Figure H-1, page H-4, for information to record/obtain when receiving these calls

H-10. When an anonymous warning or threat is received, initiate the bomb-threat data card and notify the PMO, security police, security forces, or other law-enforcement/security offices immediately. Local SOPs will determine subsequent actions. Immediate action may include a search without evacuation, the movement of personnel within the establishment, a partial evacuation, or a total evacuation. The following criteria helps determine what immediate action to take:

- Factors favoring a search before the movement of personnel:—
  - There is a high incidence of hoax telephone threats.
  - Effective security arrangements have been established.
  - Information in the warning is imprecise or incorrect.
  - The caller sounded intoxicated, amused, or very young.
  - The prevailing threat of terrorist activity is low.
- Factors favoring movement of personnel before searching:
  - The area (post or base) is comparatively open.
  - Information in the warning is precise as to the matters of location, a description of the device, the timing, and the motive for the attack.
  - A prevailing threat of terrorist activity is high.

EVACUATION DRILLS

H-11. Evacuation and search drills should be performed periodically under the supervision of the installation's or unit's senior officer. The drills should be held in cooperation with local police if possible. Personnel in adjacent buildings should be informed of drills to avoid causing unnecessary alarm.

H-12. Evacuation procedures depend on the circumstances. Prepare, publicize, and rehearse evacuation plans in advance. Address alarm systems, assembly areas, routes to assembly areas, personnel-evacuation responses, building and area clearances, and evacuation drills.

PERSONNEL-EVACUATION RESPONSE

H-13. The bomb-threat alarm system should be easily distinguished from the fire alarm. When the alarm sounds, personnel should—

- Lock up or secure all classified materials.
- Conduct a quick visual search of their immediate working area.

.

Instructions: Be calm. Be courteous. Listen, do not interrupt the caller. Notify supervisor/security officer by prearranged signal while caller is on line.

Name of Operator_____ Time_____ Date_____

Caller's Identity

Sex: ❑ Male ❑ Female ❑ Adult ❑ Juvenile Approximate age: Years_____

Origin of Call

❑ Local ❑ Booth ❑ Internal (From within bldg)
❑ Long Distance If internal, leave line open for tracing the call.

Voice Characteristics		Speech		Language	
❑ Loud	❑ Soft	❑ Fast	❑ Slow	❑ Excellent	❑ Good
❑ High Pitch	❑ Deep	❑ Distinct	❑ Distorted	❑ Fair	❑ Poor
❑ Raspy	❑ Pleasant	❑ Stutter	❑ Nasal	❑ Foul	❑ Other _____
❑ Intoxicated	❑ Other_____	❑ Slurred	❑ Lisp		
			❑ Other _____		

Accent	Manner		Background Noises	
❑ Local	❑ Calm	❑ Angry	❑ Factory Machines	❑ Trains
❑ Not Local	❑ Rational	❑ Irrational	❑ Bedlam	❑ Animals
Region_____	❑ Coherent	❑ Incoherent	❑ Music	❑ Quiet
❑ Foreign	❑ Deliberate	❑ Emotional	❑ Office Machines	❑ Voices
Race_____	❑ Righteous	❑ Laughing	❑ Mixed	❑ Airplanes
			❑ Street Traffic	❑ Party Atmosphere

Bomb Facts

Pretend difficulty with your hearing. Keep caller talking.

If caller seems agreeable to further conversation, ask questions like —
When will it go off? Certain Hour - Time Remaining - What kind of bomb? - Where are you now?
How do you know so much about the bomb? - What is your name and address?

If building is occupied, inform caller that detonation could cause injury or death.
Did caller appear familiar with plant or building by his description of the bomb location?

Write out the message in its entirety and any other comments on a separate sheet of paper and attach to this checklist.

Action To Take Immediately After Call

Notify your supervisor/security officer as instructed. Talk to no one other than as instructed by your supervisor/security officer.

Figure H-1. Sample Bomb-Threat Data Card

- Open windows (wherever possible).
- Leave the building, taking only valuable personal belongings.
- Leave doors open and immediately proceed to the assembly area.

H-14. Opening the building will reduce internal damage due to blast effects. It will also somewhat mitigate the extent of debris flying out of or falling from the building should a detonation occur.

ASSEMBLY AREAS

H-15. Choose the routes to the assembly area so that personnel do not approach the IED at any time. Preselect the routes to the assembly area, but devise a system to inform personnel of the location of the suspected IED and alternate routes. Routes prevent confusion and bunching and avoid potential hazards (such as plate glass, windows, and likely locations of additional IEDs).

H-16. Assembly areas should be preselected and well known to personnel. Establish a clearly defined procedure for controlling, marshaling, and checking personnel within the assembly area. If buildings or establishments are in a public area, coordinate the assembly areas with local police. Assembly areas are selected using the following criteria:

- Locate assembly areas at least 100 meters from the likely target or building (if possible).
- Locate assembly areas in areas where there is little chance of an IED being hidden. Open spaces are best. Avoid parking areas because IEDs can be easily hidden in vehicles.
- Select alternate assembly areas to reduce the likelihood of ambush with a second device or small-arms fire. If possible, search the assembly area before personnel occupy the space.
- Avoid locating assembly areas near expanses of plate glass or windows. Blast effects can cause windows to be sucked outward rather than blown inward.
- Select multiple assembly areas (if possible) to reduce the concentration of key personnel. Drill and exercise personnel to go to different assembly areas to avoid developing an evacuation and emergency pattern that can be used by terrorists to attack identifiable key personnel.

BUILDING AND AREA CLEARANCE

H-17. Establish procedures to ensure that threatened buildings and areas are cleared. Prevent personnel from reentering the building. Establish a cordon to prevent personnel from entering the danger area. Establish an initial control point (ICP) as the focal point for the PMO and for MP control.

H-18. Cordon suspicious objects to a distance of at least 100 meters, and cordon suspicious vehicles to a distance of at least 200 meters. Ensure that nobody enters the cordoned area. Establish an ICP on the cordon to control access; relinquish ICP responsibility to the PMO or local police upon their arrival. Maintain the cordon until the PMO, security police, security forces, or local police have completed their examination or stated that the cordon may stand down.

SEARCHING FOR A SUSPECTED IED

H-19. Searches are conducted in response to a telephonic threat or a report of an unidentified object on or near premises occupied by DOD personnel. The following types of searches may be used when searching for a suspected bomb or IED:

- An occupant search is used when the threat's credibility is low. Occupants search their own areas. The search is completed quickly because occupants know their area and are most likely to notice anything unusual.
- A team search is used when the threat's credibility is high. The search is very thorough and places the minimum number of personnel at risk. Evacuate the area completely, and ensure that it remains evacuated until the search is complete. Search teams will make a slow, thorough, systematic search of the area.

H-20. The following procedures should be followed if a search for explosive devices must be conducted before qualified EOD teams arrive:

- Make an audio check, listening for unusual sounds.
- Sweep the area visually up to the waist, then sweep up to the ceiling. Do not forget the tops of cabinets and cupboards.
- Perform a thorough and systematic search in and around containers and fixtures.
- Pass search results as quickly as possible to the leader responsible for controlling the search area. Do not use a radio; it may detonate the explosive.

H-21. Circumstances might arise in the case of a very short warning period. In other instances, a threat of a bomb against some facilities (if true) might necessitate the evacuation of a very large area. In these circumstances, searching for the presence of an explosive device to identify its location, appearance, and possible operating characteristics may be warranted.

H-22. Personnel who have not been trained in IED search and ID techniques should not search for explosive devices. Two types of errors are very common—the false ID of objects as IEDs and the incorrect ID of IEDs as benign objects. Depending on the devices used to arm and trigger an IED, the search process could actually result in an explosion.

SEARCH ORGANIZATION

H-23. The person controlling the search should have a method of tracking and recording the search results (such as a diagram of the area). Delegate areas of responsibility to the search-team leader, who should report to the person controlling the search when each area has been cleared. Pay particular attention to entrances, toilets, corridors, stairs, unlocked closets, storage spaces, rooms and areas not checked by usual occupants, external building areas, window ledges, ventilators, courtyards, and spaces shielded from normal view.

DISCOVERY OF A SUSPECTED IED

H-24. When a suspicious object has been found, report its location and general description immediately to the nearest law-enforcement or supervisory person. Do not touch or move a suspicious object. Instead, perform the following steps:

- If an object appears in an area associated with a specific individual or a clearly identified area—
  - Ask the individual/occupant to describe objects they have brought to work in the past few days.
  - Ask for an accounting of objects.
  - Ask for a verbal description/ID of objects.
- If an object's presence remains inexplicable—
  - Evacuate buildings and surrounding areas, including the search team.
  - Ensure that evacuated areas are at least 100 meters from the suspicious object.
  - Establish a cordon and an ICP.
  - Inform personnel at the ICP that an object has been found.
  - Keep the person who located the object at the ICP until questioned.
  - Avoid reentering the facility to identify an object that may or may not be an IED.

REACTING TO AN EXPLODED IED

H-25. The following procedures should be taken when an explosive/IED detonates at a DOD facility:

- For explosions without casualties—
  - Maintain the cordon. Allow only authorized personnel into the explosion area.
  - Fight any fires threatening undamaged buildings without risking personnel.
  - Report the explosion to the PMO, security police, security forces, or local police if they are not on the scene.
  - Report the explosion to the installation operations center even if an EOD team is on its way. Provide as much detail as possible, such as the time of the explosion, the number of explosions, the color of smoke, and the speed and spread of fire.
  - Ensure that a clear passage for emergency vehicles (fire trucks, ambulances, and so forth) and corresponding personnel is maintained.
  - Refer media inquiries to the PAO.
  - Establish a separate information center to handle inquiries from concerned friends and relatives.
- For explosions with casualties—
  - Select a small number of personnel to help search for casualties.
  - Assign additional personnel the responsibility for maintaining the cordon to keep additional volunteers searching for casualties.

Maintain the cordon until the EOD team verifies no further presence of bombs/IEDs at the site and the fire marshal determines that risk of additional injury to searchers from falling debris is acceptable.

- Prepare a casualty list for notification of next of kin; delay publication of the list until its accuracy is determined.
- Arrange for unaffected personnel to contact their next of kin immediately.

H-26. Civilian management officials and subordinate military commanders continue to have important personal roles to fulfill during a bomb/IED attack on DOD personnel, facilities, and assets. Perform the following procedures when reporting an attack:

- Pass available information to the operations center.
- Avoid delaying reports due to lack of information; report what is known. Do not take risks to obtain information.
- Include the following information in the report:
  - Any warning received and if so, how it was received.
  - The identity of the person who discovered the device.
  - How the device was discovered (casual discovery or organized search).
  - The location of the device (give as much detail as possible).
  - The time of discovery.
  - The estimated length of time the device has been in its location.
  - A description of the device (give as much detail as possible).
  - Safety measures taken.
  - Suggested routes to the scene.
  - Any other pertinent information.

H-27. Perform the following procedures when providing emergency assistance to authorities:

- Ensure that the PMO, security police, security forces, and other emergency-response units from local police, fire and rescue, and EOD teams are not impeded from reaching the ICP. Help maintain crowd control and emergency services' access to the site.
- Evacuate through the doors and windows of buildings.
- Assist the on-scene commander by obtaining a building diagram showing detailed plans of the public-service conduits (gas, electricity, central heating, and so forth), if possible. If unavailable, a sketch can be drawn by someone with detailed knowledge of the building.
- Locate, identify, and make witnesses available to investigative agency representatives when they arrive on the scene. Witnesses include the person who discovered the device, witnessed the explosion, or possesses detailed knowledge of the building or area.

H-28. Performing the above steps will provide substantial assistance to the crisis-management team and give other personnel constructive, supportive actions to take in resolving the crisis. Care must be exercised, however, that additional explosive devices are not concealed for detonation during the midst of

rescue operations. These attacks add to the physical damage and emotional devastation of bomb/IED attacks.

H-29. The use of bombs and IEDs during terrorist attacks against DOD personnel, facilities, and assets is a common occurrence. The procedures outlined in this appendix are intended to help a DOD facility respond to an attack before an explosive device detonates. The procedures are also intended to help mitigate the consequences of an attack in case efforts to find an explosive device and render it inoperable are not successful. Incurring the costs to DOD facilities and installations of detecting an explosive device and terminating a terrorist incident before the device can detonate are almost always preferable rather than exercising plans and options to respond to a detonation. Several of the security measures discussed will help reduce the likelihood of a successful bomb/IED attack against DOD assets.

Appendix I

Executive Protection

DOD Directive 2000.12 recognizes a need to provide protection to military officers and DOD civilians who are assigned to high-risk billets, who are (by the nature of their work) high-risk personnel, or who are assigned to facilities identified as high-risk targets. The directive defines these terms as follows:

- High-risk billet. Authorized personnel billet (identified and recommended by appropriate authority) that because of grade, assignment, travel itinerary, or symbolic value may make personnel filling them an especially attractive or accessible terrorist target.
- High-risk personnel. US personnel and their family members whose grade, assignment, travel itinerary, or symbolic value may make them an especially attractive or accessible terrorist target.
- High-risk target. US facilities and material resources that, because of mission sensitivity, ease of access, isolation, or symbolic value may be an especially attractive or accessible terrorist target.

NOTE: For purposes of this appendix, the term executive will be applied to all persons requiring additional security protection who are assigned to high-risk billets, designated as high-risk personnel, or identified as high-risk targets.

SUPPLEMENTAL SECURITY MEASURES

I-1. The specific supplemental security measures that may be furnished to executives are subject to a wide range of legal and policy constraints. US law establishes stringent requirements that must be met before certain security measures may be implemented. DOD regulations, instructions, and legal opinions may further constrain the implementation of some protective measures described in this chapter. The SOFAs and MOUs between the US and a foreign government will also limit the use of some supplemental security measures. Leases and other conditions imposed by contract for purchase of land or buildings by the US for DOD use may also limit the application of certain security techniques. All of these constraints should be carefully considered when conducting security surveys, developing plans, and implementing additional security measures to protect high-risk personnel.

EXECUTIVE PROTECTION GOALS

I-2. In the discussion that follows, several measures are outlined that can afford senior military officers and DOD personnel additional protection against terrorist acts. The purpose underlying these measures is to—

- Increase the interval of time between detecting a threat and the onset of hostile action against executives and their dependents.
- Increase the amount of time required by terrorists to gain physical access to executives from the onset of hostile actions, whether the executives are at home, at the office, or in transit.

I-3. The implementation of supplemental security measures should strive to achieve the following prioritized goals:

- Enhancements should hold the terrorist threat at bay until a response force arrives (delay at a distance).
- Enhancements in physical security should enable executives to flee to safety (delay to permit flight).
- Enhancements should permit the executive to retreat into a safe haven of sufficient strength and survivability. This should enable a response force to wage an effective counterattack to liberate executives and others accompanying them to a safe haven, including family members at home and colleagues and visitors at work (delay, hold, and counterattack).

I-4. The following supplemental measures should be applied with care. There is a clear trade-off between increasing the level of physical security at the office and at home and preserving the anonymity of executives, thereby avoiding telltale signs of activity that point to prominence or criticality. These measures can be expensive. Expense can be measured not just in terms of dollars, but also in terms of changes to organizational routine. Therefore, three questions must be resolved before implementing bold, disruptive, and expensive supplemental security enhancements:

- What are the most cost-effective means of enhancing the security of executives at risk?
- How many changes in organizational routines and personal behaviors will have to be made for security measures to be effective in reducing the risk of terrorist attacks and the vulnerability of executives to such attacks?
- What are the anticipated costs of additional security measures in terms of dollars, organizational functionality, and mission capability?

I-5. Security enhancements can be made to improve the security of executives and can be even more effective if executives and their families take full advantage of and reinforce those measures. If executives do not change their behavior to accommodate additional security and protective measures, then the behaviors can effectively defeat the purpose of additional protection. Additional increments of security can be obtained to defeat virtually any threat. However, there is a point at which it is no longer cost-effective to add layer upon layer of protective measures to defeat a threat.

RESIDENTIAL SECURITY MEASURES

I-6. While terrorist groups conduct intelligence operations to identify targets, mistakes have been made in the past. DOD personnel should avoid leasing residences previously used by representatives of governments or organizations known to be targets of various terrorist groups. DOD personnel

leasing residences formerly used by representatives of such governments may be placing themselves unnecessarily at risk of being attacked as a result of mistaken identity.

I-7. An executive's entire lifestyle should be included in security surveys used to assess the need for supplemental physical-security measures at the office. The executive's home and transportation from home to office and back should also be examined for risk and vulnerability. The same principles used to identify supplemental security improvements in an office environment apply to an executive's home environment as well. The purposes of physical-security enhancements are to—

- Increase the amount of time terrorists need to initiate and complete an attack on executives while at home, thereby giving response forces more time to rescue executives and their dependents.
- Reduce potential harm to executives and their families because of a terrorist assault mounted against the residence.

I-8. The goals of enhanced residential physical-security measures are to—

- Increase the amount of time between detection of a threat and the onset of hostile actions.
- Delay the terrorists as long as possible. Prevent terrorist access to executives and their family members and make it difficult to leave the scene to escape prosecution. These measures should not further jeopardize the lives of executives and their family members.
- Provide a safe haven where executives and their family members may flee for security pending the arrival of a response force on the scene.

I-9. The following measures can be implemented selectively to help security personnel achieve these objectives:

- Increase the time interval between threat detection and the onset of hostile terrorist acts by—
  - Ensuring that all door locks and window clasps are working.
  - Ensuring that all doors and windows are properly secured to their frames and that the frames are properly anchored to the residential structure.
  - Locking driveway gates with a security lock to prevent entry.
  - Installing a through-door viewing device or visitor intercom.
  - Installing security lights to aid in viewing entrances.
- Increase the number of physical barriers between the outer perimeter of the residence and the interior of the residence by—
  - Adding heavy, remotely operated gates to all fences, walls, and perimeter barriers consistent with the penetration resistance of the barrier between the residence, the street, and adjacent neighbors.
  - Creating a vestibule or air lock between living quarters and the exterior of a residence, ensuring that no one can enter the residence directly from the outside.
  - Adding fire doors or security doors or gates between the residence's bedrooms and living areas.

- Increase the time required to penetrate exterior structural walls by explosives, hand-held power tools, and hand tools by—
  - Adding additional armor covered by aesthetically pleasing materials to exterior walls.
  - Adding a separate reinforced masonry wall around the residence.
- Increase the surveillance of the residence and decrease response time by—
  - Installing CCTV systems to permit remote viewing of all doors and windows accessible from the ground, nearby structures, trees, or easily acquired platforms (such as a van parked next to a wall).
  - Installing area IDSs between the residence's perimeter and the residence itself, varying the number and types of sensors, and adding backup communication channels between the IDS and a surveillance assessment/response dispatch center.
- Increase the residence's durability and survivability to a terrorist attack by—
  - Fitting windows with either venetian blinds or thick curtains to reduce the observability of activities within the residence and to reduce hazards of flying glass in case of nearby explosions or gunfire.
  - Installing backup power systems for security devices (surveillance systems, communication systems, and access-control systems).
  - Ensuring that backup communication is available with the installation or embassy's security department via a secure landline or two-way radio.
  - Fitting a panic-alarm bell to the outside of the house with switches on all floor levels. Such an alarm should also annunciate at the local police and cognizant DOD or DOS security office.
  - Installing a safe haven in the home.

TRANSPORTATION MEASURES

I-10. High-risk personnel are most accessible to terrorists while in transit in official or privately owned vehicles. Specific steps can be taken to reduce the vulnerability of executives in transit.

SPECIAL TRANSPORTATION IN TRANSIT FROM DOMICILE TO DUTY

I-11. As a rule, Congress has strongly opposed the provision of domicile-to-duty transportation by the federal government to its officers and employees. Only 16 officials are entitled by statute to such assistance. Congress did, however, grant authority to the President and the heads of executive agencies and departments to provide domicile-to-duty transportation under certain circumstances. According to the statute, "a passenger carrier may be used to transport between residence and place of employment an officer or employee with regard to whom the head of a Federal agency makes a determination, [provided] that highly unusual circumstances present a clear and present danger, that an emergency exists, or that compelling operational considerations make such transportation essential to the conduct of official business."

I-12. The phrase “highly unusual circumstances which present a clear and present danger” is understood to mean that—

- The perceived danger is real, not imaginary.
- The perceived danger is immediate or imminent, not merely potential.
- Proof is provided that the use of a government vehicle would provide protection not otherwise available.

I-13. Such a danger would exist where there is an explicit threat of terrorist attacks or riot conditions and such transportation would be the only means of providing safe passage to and from work.

I-14. The phrase “emergency exists” means that there is an immediate, unforeseeable, temporary need to provide home-to-work transportation for an agency’s essential employees. The phrase “similarly compelling operational considerations” means that there is an element of gravity or importance for the need of government-furnished transportation comparable to the gravity or importance associated with a clear and present danger or an emergency. Congress suggested further, “in such instances, [it is expected] that home-to-work transportation would be provided only for those employees who are essential to the operation of the government.”

I-15. The Secretary of Defense has the statutory authority to allow a CINC to use government-owned or -leased vehicles to provide transportation in an area outside of the US for members of the uniformed services and other DOD personnel under certain circumstances. These circumstances include and are limited to a determination by the CINC that public or private transportation in the area is unsafe or is not available. Under these circumstances, DOD may provide transportation (usually in government buses or passenger vans) to personnel and their family members if it will help the CINC and his subordinate commanders maintain the capability to perform or undertake assigned missions. This transportation is not intended for transporting personnel from their residences to their places of work. The Secretary of Defense and the Service Secretaries also have the statutory authority to provide transportation from home to duty stations and back on a limited basis. This authority is usually implemented by providing a nontactical armored vehicle (NTAV) to protect personnel.

I-16. It is a DOD policy to make NTAVs available where necessary to enhance the security of DOD personnel consistent with the requirements and limitations found in the statute. DOD issuances, service regulations, and CINC guidance stipulate detailed procedures by which DOD manages NTAV programs. The statute also establishes a procedure for Presidential waiver of the “buy American” requirement; DOD and service regulations provide for the delegation of Presidential authority from the President to the Secretary of Defense; to the Director, Defense Security Assistance Agency; and to the Director, DIA. DOD Instruction 5210.84 authorizes DOS acquisition and installation of light vehicle armoring to DOS specifications in local defense-component vehicles on a reimbursable basis. The level of protection provided to the Defense Component Office will comply with approved overseas security policy group armored-vehicle standards.

I-17. The DOD recognizes two classes of NTAVs—heavy and light. Heavy NTAVs are fully armored vehicles intended to protect occupants from attack

by bombs; IEDs; grenades; and high-velocity, small-arms projectiles. Light NTAVs are less than fully armored vehicles and are intended to protect occupants from attack by medium-velocity, small-arms projectiles and at least some types of IEDs.

I-18. The dividing lines between heavy and light NTAVs have become less distinct over time as armoring techniques and materials have given greater capability to NTAVs that are not classified as heavy. As a practical matter, add-on vehicle-armoring kits are now in production which (when properly installed in an appropriately powered and suspended vehicle) will provide a level of protection approaching that of the heavy NTAVs.

Heavy NTAVs

I-19. Heavy NTAVs may be assigned to US personnel upon certification by a Service Secretary only under the following conditions:

- Highly unusual circumstances present a clear and present danger to the health and safety of a nominated protectee.
- Compelling operational considerations make such transportation essential to conducting official business.

I-20. If the physical-security survey concludes that a heavy NTAV is warranted, the nominated protectee's Service Secretary shall, on the advice and recommendation of a combatant commander, determine whether the use of a heavy NTAV is warranted. If so, the Service Secretary shall authorize the use of a vehicle for a renewable 90- to 360-day period. At the end of the period, the requirement will be reexamined and a recertification for the protection shall be issued by the Service Secretary.

I-21. Each of the services manages a portion of the DOD's NTAV program. Each service has issued supplementary mandatory guidance for processing requests for, as well as allocation and use of, these scarce assets.

I-22. Heavy NTAVs are complex systems requiring specialized maintenance and operation. Normally, they will be assigned to DOD personnel with a driver who has been properly trained in the operation and maintenance of the vehicle. The operator is not a chauffeur; he is an integral part of a supplemental security package provided by DOD to meet its obligations in protecting key assets.

Light NTAVs

I-23. Light NTAVs may also be provided to US employees and officers where highly unusual circumstances present a clear and present danger to the health and safety of a nominated protectee or compelling operational considerations warrant their use. This category of NTAV features add-on armoring. While they are a less-complex armoring system than those used in heavy NTAVs, light NTAVs afford substantial protection to occupants against a variety of threats. New developments in after-manufacture armoring kits for vehicles are occurring at a rapid pace, increasing the number of vehicle manufacturers and models for which other NTAV modifications are suitable. Each service and the DIA have instructions for implementing DOD policy that authorizes the use of other NTAVs to enhance personnel protection of high-risk persons.

PRIVATELY OWNED VEHICLES

I-24. High-risk personnel may wish to forego the use of POVs during periods of extreme risk. Considerations include selecting measures that—

- Deter secret entry, making undetected placement of IEDs in or under the vehicle difficult for terrorists to accomplish.
- Enhance the vehicle's ability to increase distance between it and pursuers.
- Assist response forces in case of an incident.
- Make the vehicle appear little different than its standard models.

INDIVIDUAL PROTECTIVE MEASURES

I-25. Executives can enhance their personal security in the office environment by—

- Discouraging staff members who are taking telephone messages from disclosing their whereabouts.
- Ensuring that caution is used when opening mail and being especially careful with letters or packages that might contain IEDs.
- Ensuring that access is strictly limited to their office area.
- Limiting publicity and keeping official biographies short. This includes using outdated photographs if a publicity photograph is essential.
- Ensuring that they are not working alone late at night and on days when the remainder of the staff is absent.
- Working in conference rooms or internal offices where outside observation is not possible if late-night work is necessary. Security officers should be notified of the work so that they can periodically look in.
- Ensuring that office furnishings are not placed directly in front of exterior windows.

OFFICIAL BUSINESS AWAY FROM THE OFFICE

I-26. The following suggestions reinforce efforts by executives to maintain the high level of security provided in the home or office environment while on official business outside of these locations:

- Discuss security requirements with the person planning the function.
- Travel to and from the function with escorts.
- Choose the route carefully.
- Avoid publicizing planned attendance at official functions (unless required).
- Attempt to sit away from both public areas and windows.
- Encourage the function's sponsor to close the curtains to minimize the likelihood that anyone outside will be able to see inside and determine who is attending the function. This is extremely important for an evening function, when a well-lit interior can be easily viewed from a darkened exterior.
- Request that external floodlights be used to illuminate the area around the building where an evening function will occur.

LOCAL OFFICIAL AND UNOFFICIAL TRAVEL

I-27. Executives can greatly enhance their personal security when conducting official and unofficial travel by following these general practices:

- Vary daily patterns, such as leaving and returning at different times.
- Consider escorts to and from work or travel with a neighbor.
- Establish a simple oral or visual duress procedure between executives and drivers (for example, a phrase or movement used by the executive or driver only if something is amiss).
- Vary taxi companies. Ensure that the ID photo on the license matches the driver. If uneasy for any reason, take another taxi.
- Attend social functions with others, if possible.
- Examine the car before entering to see if there has been any interference. A small mirror on a rod is a cheap and effective method to inspect underneath cars. Do not touch the vehicle until it has been thoroughly checked (inside, around, and under).
- Avoid leaving personal items exposed in the car (uniform items, service-issued maps, official briefcases, and so forth).

SECURITY PRACTICES WHILE DRIVING

I-28. Executives can take the following measures to enhance security while driving:

- Keep car doors locked. Do not open windows more than a few inches.
- Avoid overloading a vehicle, and wear seat belts.
- Park vehicles in parking areas that are either locked or monitored. Never park overnight on the street. Before entering vehicles, check for signs of tampering.
- Keep the trunk locked.
- Drive in the inner lanes to keep from being forced to the curb.
- Use defensive and evasive driving techniques. Drill with your driver by watching for suspicious cars and taking evasive action.
- Avoid driving close behind other vehicles (especially service trucks), and be aware of activities and road conditions two to three blocks ahead.
- Beware of minor accidents that could block traffic in suspect areas such as crossroads. Crossroads are preferred areas for terrorist or criminal activities because they offer escape advantages.

I-29. If a terrorist roadblock is encountered, use the shoulder or curb (hit at a 30- to 45-degree angle) of the road to go around it or ram the terrorist's blocking vehicle. Blocking vehicles should be rammed in a nonengine area, at a 45-degree angle, in low gear, and at a constant moderate speed. The goal is to knock the blocking vehicle out of the way. In all cases, do not stop and never allow the executive's vehicle to be boxed in with a loss of maneuverability. Whenever a target vehicle veers away from the terrorist vehicle, it gives adverse maneuvering room and presents a better target to gunfire.

INTERURBAN, NATIONAL, AND INTERNATIONAL TRAVEL SECURITY PRACTICES AND PROCEDURES

I-30. To enhance security in interurban, national, and international circumstances, executives should—

- Book airline seats at the last moment. Consider using an alias.
- Restrict the use of ranks or titles.
- Avoid allowing unknown visitors in the hotel room or suite.
- Keep staff and family members advised of the itinerary and subsequent changes. Clearly and emphatically restrict this information to those having a need to know.

HOME SECURITY PRACTICES AND PROCEDURES

I-31. To enhance security at home, executives should—

- Check the ID of persons entering the premises (electricians, plumbers, telephone-maintenance personnel, and so forth). When in doubt, call their office to verify their identity before allowing them in your home.
- Avoid opening the door to a caller at night until he is visually identified through a window or a door viewer.
- Close curtains in a room before turning on lights.
- Consider placing the telephone where you will not be seen from doors or windows when answering.
- Investigate the household staff (especially temporary staff members).
- Stay alert and be on the lookout for the unusual. Ensure that the home is locked and secure whenever the residence is unattended. Be cautious upon return and look for the movement of furniture or the placement of unusual wires.
- Note and report suspicious persons.
- Control house keys strictly.
- Park the car in a locked garage.
- Consider installing a panic-alarm bell to the outside of the house with switches located on all floor levels.
- Clear the area around the house of dense foliage or shrubbery.
- Test duress alarms (if available). Make certain that family members understand how they work as well as the importance of their use.
- Cooperate with law-enforcement personnel, and abide by their security recommendations.

SECURITY AT SOCIAL AND RECREATIONAL ACTIVITIES

I-32. The risk of terrorist incidents is always present for high-risk personnel or personnel assigned to high-risk billets. The following measures are intended to permit executives to live a close-to-normal life while still remaining mindful of the risks to their security.

- Ensure that the host is aware of and takes appropriate measures for your security.
- Have your personal staff assist a civilian host, if required.
- Arrange for visitors to be subject to adequate security control.

- Screen the invitation list, if possible.
- Vary the times of sporting activities (golfing, jogging, and so forth).

COMBATING-TERRORISM TRAINING FOR EXECUTIVES

I-33. Combatant commanders annually compile a list of high-risk billets in their AO. These lists are forwarded through the appropriate service personnel channels, enabling each service to identify, plan, and provide resources to meet training requirements. All personnel and adult family members en route to high-risk billets must attend the Individual Terrorism Awareness Course (INTAC) conducted at the US Army John F. Kennedy Special Warfare Center at Fort Bragg, North Carolina. During this one-week course, personnel will receive instruction in defensive-driving techniques and survival shooting as well as individual protective measures and hostage survival. These individuals should also attend the appropriate regional orientation course (Middle East, Asia/Pacific, Latin America, or Africa) offered at the US Air Force Special Operations School at Hurlburt Air Force Base (AFB), Florida. The service member whose duties will require frequent vehicle operation should attend an appropriate evasive-driving course. Information on current offerings may be obtained by contacting the service representative to the DOD Antiterrorism Coordinating Committee or the Combating Terrorism Branch in the Office of the Assistant Secretary of Defense (OASD) Special Operations/ Low-Intensity Conflict (SO/LIC).

TRAVEL TO POTENTIAL PHYSICAL-THREAT RISK AREAS

I-34. Personnel en route to potential physical-threat risk areas (as identified by the OASDSO/LIC) should attend one of the following courses:

- The Dynamics of International Terrorism Course conducted at the US Air Force Special Operations School at Hurlburt AFB, Florida. During this one-week course, personnel will receive lectures on threats by region (Europe, Middle East, Latin America, Asia/Pacific, and Africa), the history and psychology of terrorism, personnel combating-terrorism measures (vehicle, personal, airline, and physical security), and hostage survival.
- A Regional Orientation Course (Middle East, Latin America, Africa, Asia/Pacific) at the US Air Force Special Operations School at Hurlburt AFB, Florida. This one-week course offers personnel instruction in cultural, political/military, and individual security factors associated with the region.

I-35. Installation security personnel may also receive the above training if they have completed the Antiterrorism Instructor Qualification Course (AIQC) at Fort Bragg, North Carolina.

PROTECTIVE SECURITY DETAILS

I-36. Each service can provide bodyguards for key senior military officers, DOD civilians, other US officials, or foreign dignitaries requiring personal protection. Each Service Secretary is responsible for assigning protective security details (PSDs) to service members based on the recommendation of

their counterintelligence and/or law-enforcement investigation staffs. The PSDs are assigned to DOD personnel who meet requirements established by service regulations. In general, PSDs may be assigned only to those personnel whose position or assignment places them at risk and whose continued availability to the National Command Authorities and the CINCs is vital to DOD's mission execution.

I-37. A PSD provides high levels of security to an executive by establishing a series of protective cordons around him. The establishment of defense in depth often means that the innermost protective layer is in close contact with the executive at all hours of the day and night.

I-38. A PSD is trained to maintain a low profile. It is concerned about the executive's visibility and its ability to blend into his surroundings. There is nothing more damaging to the security of an executive than the obvious, detectable presence of a PSD when all other measures to have him blend into the local environment have been successful. A PSD will strive to keep travel routes and means of transportation from being publicized. If this cannot be accomplished, the PSD may suggest editorial changes to the itinerary scheduled for release to limit details of planned travel from public disclosure. For example, routes to and from announced appointments usually do not need to be revealed.

I-39. During the course of a PSD's mission, its members may be asked to perform several different security functions. They may, for example, perform direct or indirect protection or escort duty. Direct protection is open and obvious; indirect is generally a surveillance measure. The security-guard unit may operate as an interior guard and may consist of one or more men stationed at fixed posts. A PSD's members should know the identity of each individual in the party of a protected official; executives can help by introducing them to each member of the official party.

I-40. The protected person's attitude is critical to the success of the PSD's mission. Executives have a right and a responsibility to make their wishes known with respect to their personal security. They also have an obligation to listen carefully to the head of the PSD who is trained and highly qualified to help make reasonable judgments about manageable risks. A PSD's members understand that their function is inherently intrusive and that executives can easily resent the loss of privacy that accompanies the protection offered. On the other hand, PSDs have jobs to do, not merely to protect executives, but to help safeguard mission-critical assets—senior military and civilian leaders.

I-41. One of the most demanding functions placed on a PSD is to limit the ability of individuals to circulate and approach the executive. This is often very frustrating to executives who wish to shake hands, engage in close conversations with visitors, and move freely and without impediment in a social situation. The PSDs are trained to strictly enforce limitations on the circulation of individuals, carefully checking each person for ID and ascertaining that he is authorized to be present at the occasion.

I-42. DOD personnel who are provided with PSDs and must conduct official business or hold social engagements in large rooms can take steps to minimize the disruptions to such functions. These steps include—

- Providing advance attendee lists to the head of the PSD.
- Having one or more members of the staff who know the attendees stand with PSD members and identify the attendees as they arrive.
- Informing attendees that they will be admitted only at specified entrances.

I-43. The PSD's members are highly trained security specialists. While in the company of executives, they will be accommodating and helpful. Executives should remember, however, that the primary function of the PSD's members is to protect them, not perform errands or carry out personal services. A PSD's members who are performing valet or other chores cannot effectively protect the senior officers or civilian officials to whom they have been assigned.

EXECUTIVE-PROTECTION SYSTEM INTEGRATION

I-44. This appendix has focused on supplemental security measures used to address terrorist threats to senior high-risk personnel within the DOD. Various methods and measures have been discussed that provide increments of security over and above the base level of security provided to all DOD personnel assigned to an installation, facility, activity, or unit. In making decisions to allocate protective resources to enhance the security of senior officers and senior DOD officials, it is essential to remember that measures must be applied systematically. Additional security measures implemented to protect high-risk personnel in the office environment must be carried over to official functions conducted outside the office. The security measures must also be extended to protected persons' private lives and, depending on the nature of the threat, the lives of their family members.

I-45. The converse is equally true. It makes no sense to provide domicile-to-duty transportation for a high-risk person and make no provision for additional protection at home, at the office, and at official business and social functions. In view of the total costs of security measured in dollars, time, and inconvenience to protected persons, their staffs, colleagues, and families, it may be more prudent to radically alter living and working arrangements than to try to augment security in a piecemeal manner. For example, it might be prudent to house high-risk personnel within a DOD installation rather than to try to secure a detached, private residence at a substantial distance from the operations base of a response force. The key to successful executive protection is to ensure that the level of protection afforded by physical-security measures, operational procedures in the office and at home, and PSDs is constant. The level of protection must be matched to the threat and must be sustainable. Executives have a special responsibility to set a personal example of combating-terrorism awareness; of attention to personal, family, office, information, and OPSEC concerns; and of combating-terrorism security measures implementation. By doing so, they make their colleagues and subordinates more aware and more conscious of their security environment and less likely to be victimized by terrorist attacks.

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Civil Disturbances

U.S. Marine Corps

PCN 144 000050 00

screen, or similar materials to protect against sniper fire and thrown objects.

Armored vehicles patrolling an area of violence provide an added psychological effect. And they allow troops to maneuver close to snipers to make an apprehension. They also may be used as rescue vehicles to extract hostages or people surrounded by a hostile crowd.

Varying patrol routes and times for mounted and dismounted patrols keeps lawbreakers from being able to pick a safe place or time to act. Patrols are particularly useful in preventing overt arson and violence. Patrol members can also spot and promptly report fires. Whenever possible, military patrols are integrated with civil police patrols. Joint patrols conserve military forces and aid civilian-military communications. They also help troops become familiar with an area quickly. And the civil police are available to make apprehensions if they are needed. Patrol members must practice proper standards of conduct and fair treatment of civilians at all times. They are performing an important community relations function as well as a control function.

Several types of patrols can be employed effectively for area control. Foot patrols are most effectively used in small areas or in areas where many people are moving about. Foot patrols must be able to control the disorderly. They must also be able to protect themselves. The size of the patrols may vary with the degree of violence and the extent of activity in the patrol area. But most often foot patrols are squad-size. A squad has enough patrol members to keep the use of force minimal. It also keeps the patrol from being easily isolated or placed in jeopardy.

Land or water motor patrols, because of their speed and mobility, provide timely reconnaissance and broad area coverage. Motor patrols are in radio contact with task force headquarters. They can make periodic contacts with foot patrols and stationary posts that lack communications. And motor patrols can respond quickly to calls for help from other patrols and from guard posts. Land patrols should have at least two vehicles with four men in each. The patrol must have strength in numbers. And it must not be easily isolated or placed in jeopardy. All motor patrols are equipped with fire extinguishers to put out small fires, thus reducing the burden on the fire department.

Air patrols are helpful in directing the overall control effort in the disturbance area. They can perform reconnaissance and surveillance over the disturbance area. They are an excellent means of providing timely information. They can monitor rioters' actions, the extent of damage, the status of access routes, the locations and conditions of road barriers, and other important conditions.

NEUTRALIZE SPECIAL THREATS

Control forces can be exposed to special threats that pose grave danger to both the control force and the general community. These threats include, hostage/barricade situations, sniping, bomb threats, and fires. Quick, organized action by the control force can reduce or possibly prevent the tragedy that these events can cause.

SNIPER FIRE

Troops who take part in civil disturbance operations may be fired upon by snipers. And when crowd control formations are being used, the threat of sniper fire increases. Troops must be prepared to react immediately. Measures to counteract sniper

fire must be executed with speed and precision.

The troops must be aware, however, that persons in the crowd may try to disrupt a formation with loud noises, such as fireworks or bursting paper bags. The troops must be alert to such tactics. Automobile backfires, firecrackers, light flashes, accidental weapon discharges, indiscriminate firing by control forces, or distant sounds of firing can all be misconstrued as sniper fire.

The normal reaction of a well-trained combat soldier is to respond to sniper fire with an overwhelming mass of firepower. In a civil disturbance, this tactic endangers innocent people more than snipers. The preferred tactic is to use an SRT to enter the building from which the sniper fire originates. Troops must not return a sniper's fire unless the prerequisites for using deadly force exist and they have a positively identified target. The control force leader must not permit a mass return of fire that may endanger innocent people. If firing is necessary, it must be done by a selected marksman acting on orders from the senior military person present. And the marksman must consider the possibility of ricochets before engaging a target.

When troops encounter possible sniper fire they:

1. Take cover immediately.
2. Notify bystanders to clear the area or seek cover.
3. Verify that it is sniper fire that has, in fact, been encountered.
4. Report verified sniper fire and request assistance.
5. Locate the sniper's position.

When sniper fire is verified, the troops inform the appropriate people of the situation so help can be sent to the scene. Usually this will be an SRT and a negotiation team. The troops should try to fix the exact position of the suspected sniper so they can inform the SRT leader.

Measures must be taken to secure the area. If the control force unit on the scene is large enough, they can secure the area. In most situations, however, it will ,be necessary to commit reserves or other control force elements. Regardless of what units are used, they must take steps to isolate, evacuate, observe, and support.

A security unit sets up an inner and an outer perimeter to isolate the area and to block the sniper's escape routes. The perimeters are set up far enough from the danger area to prevent exposure to sniper fire. The unit notifies all other control force units that are not involved in neutralizing the sniper to stay clear of the area.

If the sniper is encountered in a lightly populated area or building, the unit advises residents to leave using a specific route or exit. As the residents exit, the security unit screens and identifies them to make sure that the sniper is not among them. Witnesses and people suspected of being involved with the sniper are detained. Some residents may be unwilling, unable, or afraid to leave. The unit then makes a second announcement advising the remaining residents to seek cover, stay where they are, and stay away from exposed areas and windows.

Control force units set up observation posts on rooftops and in windows of nearby buildings. The observers must have communications equipment. Control force units must be ready to support the SRT. That support may include:

- Setting up a staging area for the SRT and for emergency and support equipment.
- Setting up a field CP.
- Controlling crowds.

When the SRT takes action, team members will:

- Surround the building in which the sniper is concealed and gain access. They may use armored vehicles if necessary and if they are available.
- Illuminate the area during darkness. Darkening a street to gain protection from sniper fire is counterproductive. They may use night observation devices if they are available.
- Employ riot control agents initially, if feasible, rather than small arms fire. If the agents are not successful, then the team may use well-aimed fire by a specifically designated expert marksman. The number of rounds fired is kept to a minimum to reduce the hazard to innocent people.

HOSTAGE/BARRICADE SITUATIONS

In a hostage situation, the control force's main concerns are to contain the event and to remove bystanders from the area to reduce the chances of more hostages being taken. The control force contains the hostage site by setting up two perimeters. The inner perimeter of troops must be located so they can restrict the hostage taker's mobility without endangering the hostages. The outer perimeter of troops must be located where they can prevent innocent bystanders from getting injured or killed or from interfering with the activities at the hostage site. It also helps prevent observation by bystanders. The presence of onlookers may only inflame the situation.

As security is being established and innocent people are being evacuated from the area, the commander requests the negotiation team and alerts the SRT. The SRT may prepare for an assault, but they must be very careful not to interfere with the negotiation effort. For the SRT to be ready when needed, they may have to stand by as part or all of the inner perimeter. If the hostage taker tries to communicate demands to the control force before the negotiators arrive, the demands are recorded and communications are maintained, but no commitments are made. They tell the hostage taker that a negotiator will be there shortly. Any demands made and any additional information about the event are provided to the hostage-site CP. The demands and information must be provided to the negotiation team and the responding SRT.

The negotiation team must have information to support negotiations. They get their information from interviews with initial response personnel, witnesses, escaped and released hostages, and captured suspects. It is critical that the team quickly learns the identities, personalities, motives, habits, and abilities of the offenders. This information helps the negotiator relate to the offenders persuasively and on a personal level. The negotiator must know to whom he is talking. The intelligence must be organized to answer the following questions:

- Do the offenders have criminal records? If so, a wealth of personal information may be derived from their records.
- Do the offenders possess special skills and knowledge? Could they possibly be trained in explosives and sniper tactics? This information must be considered before deciding to make a straight-on assault.
- Do the offenders have any special affiliation? Are they members of any group or religious sect that may dictate or influence their behavior?
- What habits or addictions do they have that could predictably influence their behavior?

- What immediate needs do they have, such as transportation, medical care, food, water, or other basic concerns, that could be negotiable?
- If they are recognized terrorists, what are their previous methods of operation? Do they shoot hostages?

The physical descriptions of the offenders and other people inside the barracade are important. They must be distributed immediately to all persons involved in the operation. Any photographs help to identify offenders quickly if they come out pretending to be hostages. Hostage takers have forced hostages to trade clothes with them in an effort to fool control force personnel. And hostage takers have been known to give hostages empty rifles and force them to a window to see if control force personnel will fire.

Intelligence about the hostages is equally important. First, it helps ensure hostage safety. Second, it helps evaluate what might happen inside a barricade before a seige is ended. As well as knowing the number of hostages, their identities, and their descriptions, every effort must be made to learn the following information:

- Sexes and ages.
- Relationships with each other.
- Special training or skills.
- Special food and medical needs.
- Degree to which they are being threatened.
- Susceptibility to hysteria or other adverse reactions to extreme excitement or stress.

These factors can help determine the order in which a negotiator may try to have hostages released. If possible, all information about hostages should come from outside the barricade.

The control force commander must maintain strict control of firepower at all times. All the efforts and progress of a negotiation team can be destroyed with one accidental or unauthorized shot. The goal is for the negotiation team to resolve the situation without resorting to violence. The decision to commit the SRT must not be based on trying to obtain a quick resolution to the problem. Negotiations must be given time to succeed. If negotiations fail, the SRT is employed as a last resort.

FIRES

Fire, and its potential for destruction, requires detailed plans to provide immediate and effective responses to limit its effects. The actions of the firefighting task force must be closely coordinated with those of the control force. Local authorities are responsible for the task force. The firefighting task force consists of firefighting and lifesaving equipment and operational and security personnel. Additional equipment and people may be requested through mutual aid if additional resources are needed. The firefighting task force must be able to move rapidly with enough equipment to quickly put out or contain large fires and then move on. More than one firefighting task force may be needed. Each firefighting task force has its own area of operation. When large-scale fires occur in a limited area, several task forces operate together.

The firefighting task force is totally committed to containing fires. It depends on other agencies for its security. Firefighters and their equipment are extremely vulnerable to harassment and attacks. Security for firefighters usually is provided by military units. The military leaders work closely with the senior fireman or with a designated liaison to ensure that adequate and timely assistance is provided. The size of the security force varies with the size of the firefighting task force. It also varies with the level of hostility in the area and the number of people and equipment that can be allocated to the security mission.

Mobility is a must. Control force elements tasked with security must have enough vehicles and communications equipment to move rapidly. Vehicles must be equipped with flashing emergency lights to enable them to move safely through traffic and intersections. Military police vehicles, if they are available, can escort the security force.

The following actions are taken at the fire scene:

- A protective cordon is set up around the firefighters' area of operation. The cordon includes security of hoses and hydrants. The cordon concentrates on activities outside the cordon. Small units are assigned areas of responsibility like they would be for any defensive posture.
- Observation posts are positioned in and on nearby tall buildings to prevent sniping or other attacks.
- Hostile crowds are controlled with crowd control techniques. If necessary, reinforcements are called up.
- Traffic trying to enter the area is blocked and diverted.

BOMB THREATS

Bomb threats often occur during civil disturbances. Frequently, warnings are given to avoid the loss of innocent lives when a bomb has been planted. However, after an explosion, cranks or disturbed persons occasionally may make threats or give false notice to interrupt activities or business by forcing evacuations. If a fake threat successfully causes an evacuation, then more threats usually follow. But any doubts concerning safety must always be resolved in favor of evacuation.

Most bomb threats are received by telephone operators of businesses and schools. Bomb threats also may be received at rumor control centers, police headquarters, and joint operational facilities during civil disturbances. If possible, each facility should have a telephone tracing capability.

Switchboard operators and others likely to receive bomb threats can be provided with a checklist so they will know to—

- Activate the telephone tracer system if one is available.
- Learn and record the bomb's location; the time of detonation; the type of device, including physical description; the sex, approximate age, and attitude of the caller speech peculiarities or accent; distinguishing sounds or background noises coming from the caller's location; and the reason for placing the bomb.
- Inform the appropriate people of the threat.

The checklist needs to be placed near as many telephones as possible.

SAMPLE TELEPHONE CHECKLIST

When a bomb threat is received, the responsible commander notifies appropriate control force elements, fire and medical services, utilities, and EOD units. He has them report to a staging area near the threatened facility. He orders roadblocks or checkpoints set up as needed to keep unauthorized people out of the area. Perimeters to isolate the area must be far enough away to prevent danger from an explosion.

If the occupants must evacuate the building, the evacuation must be orderly. This is best accomplished by using a bomb evacuation plan, a fire plan, or announcements and directions to building occupants. The plan must designate withdrawal to a building or an area that offers shelter from the elements. Care must be taken not to create panic. Occupants should be told to check their immediate

SAMPLE TELEPHONE CHECKLIST (FRONT)

6-136 (Rev. 8-27-77)

FBI BOMB DATA CENTER

PLACE THIS CARD UNDER YOUR TELEPHONE

QUESTIONS TO ASK:

1. When is bomb going to explode?
2. Where is it right now?
3. What does it look like?
4. What kind of bomb is it?
5. What will cause it to explode?
6. Did you place the bomb?
7. Why?
8. What is your address?
9. What is your name?

EXACT WORDING OF THE THREAT:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Sex of caller: _____ **Race:** _____

Age: _____ **Length of call:** _____

Number at which call is received:

_____

Time: _____ **Date:** __/__/__ FBI/DOJ

BOMB THREAT

SAMPLE TELEPHONE CHECKLIST (BACK)

CALLER'S VOICE:

___ Calm	___ Nasal
___ Angry	___ Stutter
___ Excited	___ Lisp
___ Slow	___ Raspy
___ Rapid	___ Deep
___ Soft	___ Ragged
___ Loud	___ Clearing throat
___ Laughter	___ Deep breathing
___ Crying	___ Cracking voice
___ Normal	___ Disguised
___ Distinct	___ Accent
___ Slurred	___ Familiar
___ Whispered	

If voice is familiar, who did it sound like?

_____

_____

BACKGROUND SOUNDS:

___ Street noises	___ Factory machinery
___ Crockery	___ Animal noises
___ Voices	___ Clear
___ PA System	___ Static
___ Music	___ Local
___ House noises	___ Long distance
___ Motor	___ Booth
___ Office. machinery	Other _____
	_____
	_____

THREAT LANGUAGE:

___ Well spoken (educated)	___ Incoherent
___ Foul	___ Taped
___ Irrational	___ Message read by threat maker

REMARKS: _____

_____

_____

_____

Report call immediately to:

_____ .

Phone number _____ .

Date __/__/__ .

Name _____ .

Position _____ .

Phone number _____ .

surroundings for any unusual or out-of-place objects or packages before evacuating the building. Employees should take their briefcases, overcoats, and like items with them when they evacuate.

Selected employees or residents of the building and control force members are organized into search teams. The teams must be equipped with communications. Teams must be warned that the *use of radios* during a bomb search *can be dangerous.* Radio transmissions can cause premature detonation of a blasting cap.

The search teams also must be warned *not to touch* any suspicious items. Bombs may have antitampering devices that set them off when someone tries to move or open them. Searchers also must be warned that bombs can be disguised in many ways. Bombs can be hidden in fire extinguishers, shoe boxes, briefcases, lunch pails, and parcels. Because of this, building occupants who are on the team should look primarily for something that does not belong in the building or is out of place. Control force members on the team are there to ensure that the search is systematic and thorough. They are not there to conduct the seach. Control force members record suspicious items and their locations and report their findings to the on-site commander.

The teams first search public access areas. These areas include:

- Building utilities.
- Hallways.
- Administrative areas.
- Dining areas.
- Grounds outside the building.
- Shipping and loading areas.
- Vehicles parked near the building.
- Supply rooms.
- Stairwells.
- All accessible closets and storage areas.

They report suspicious objects or packages found during the search. These objects or packages must not be handled. Even when a bomb is located, the search must continue because there may be more than one bomb. Bomb dogs can be used to aid in the search if they are available.

When the bomb itself or a suspicious object or package is found, EOD or a police bomb squad is summoned to neutralize the bomb or suspect packages. (For further guidance on bomb threats see FM 19-30.)

(For administrative purposes—FMFM 6-19)

FM 7-90

Tactical Employment of Mortars

U.S. Marine Corps

PCN 320 000727 00

CHAPTER 4

MORTARS IN SUPPORT OF OFFENSIVE OPERATIONS

Offensive operations carry the fight to the enemy. The main reason for attacking is to destroy enemy forces. The mortar platoon participates as part of a larger force in the conduct of offensive operations. Mortars are an integral part of any attack and can be used to do the following:

- **Neutralize, suppress, or destroy enemy forces.**
- **Deprive the enemy of resources or the use of decisive terrain.**
- **Fix the enemy in position.**
- **Deceive or divert the enemy.**
- **Provide screening or obscuration.**
- **Provide battlefield illumination.**

4-1. HISTORICAL EXAMPLE

An excellent example of the integrated use of mortars to support an infantry attack occurred during the operations of Company C, 39th Infantry Regiment, 9th Infantry Division at Cherbourg, France, in June 1944 (Figures 4-1 and 4-2.)

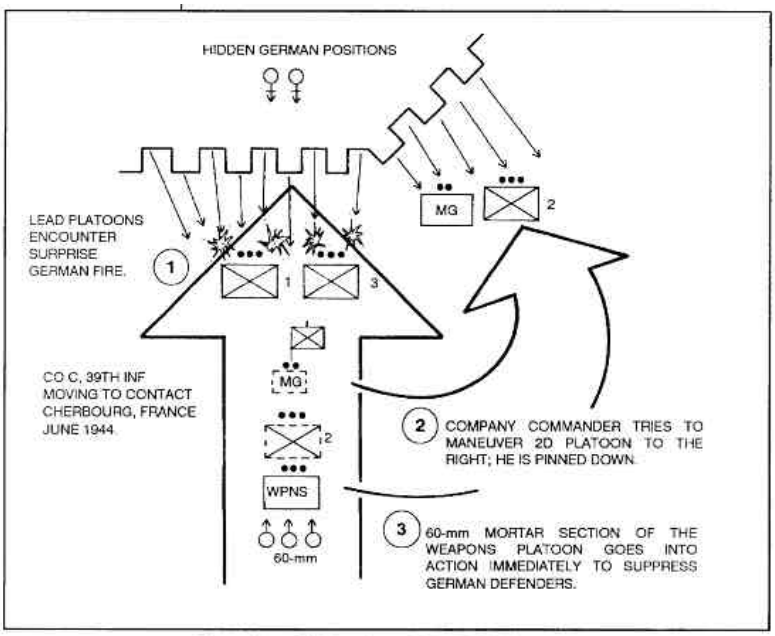
HIDDEN GERMAN POSITIONS
LEAD PLATOONS ENCOUNTER SURPRISE GERMAN FIRE.
1
1
3
MG
2
CO C, 39TH INF MOVING TO CONTACT CHERBOURG, FRANCE JUNE 1944
MG
2
WPNS
60-mm
2 COMPANY COMMANDER TRIES TO MANEUVER 2D PLATOON TO THE RIGHT; HE IS PINNED DOWN.
3 60-mm MORTAR SECTION OF THE WEAPONS PLATOON GOES INTO ACTION IMMEDIATELY TO SUPPRESS GERMAN DEFENDERS.

Figure 4-1. Initial actions of Co C, 39th Infantry.

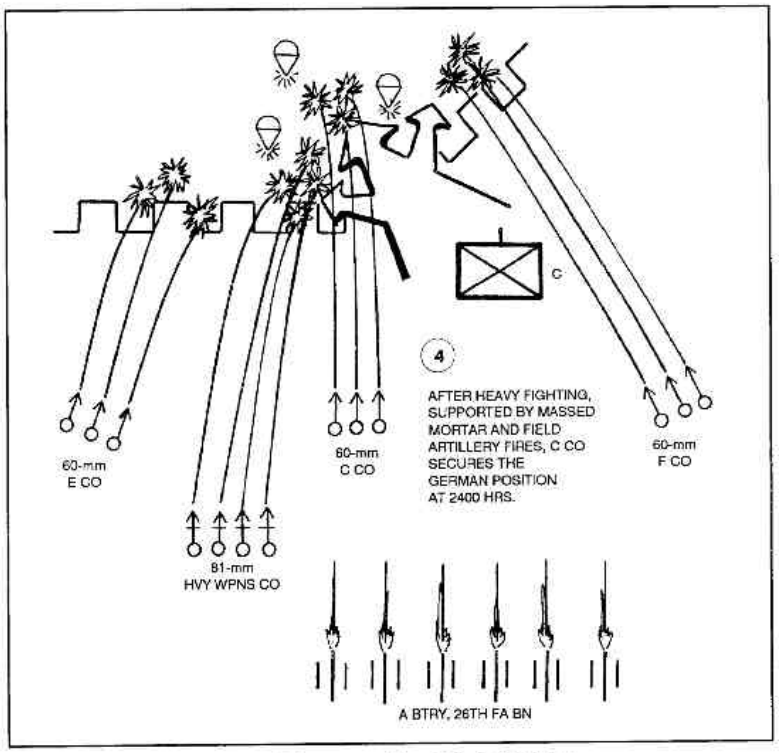
C
4
AFTER HEAVY FIGHTING, SUPPORTED BY MASSED MORTAR AND FIELD ARTILLERY FIRES, C CO SECURES THE GERMAN POSITION AT 2400 HRS.
60-mm E CO
60-mm C CO
60-mm F CO
81-mm HVY WPNS CO
A BTRY, 26TH FA BN

Figure 4-2. Subsequent actions of Co C, 39th Infantry.

a. Company C was leading the 39th Regiment's advance, with its 1st and 3d platoons in front and 2d platoon trailing. Suddenly, the Germans opened fire with flak cannon and machine guns from hidden positions. The 1st and 3d platoons were pinned down, unable to move. At the same time, German mortars and artillery began to fall on the 2d platoon and the company command group.

b. The company commander took the 2d platoon and a machine gun section with him and tried a sweeping maneuver to the right. He was unable to get any farther forward than the right flank of the 3d platoon. With all its rifle platoons pinned down by close and accurate enemy direct fire, the company was facing heavy casualties.

c. Fortunately, the weapons platoon had placed its three 60-mm mortars into action and began to deliver fires on the German positions. The 81-mm mortar platoon of the heavy weapons company also assumed firing positions and began to adjust fire onto the enemy.

d. With the combined assistance of its own 60-mm mortar platoon, the 81-mm mortar platoon from Hvy Wpns Company, and the 60-mm mortar platoons of its sister E and F companies, and aided later by the 26th FA battalion, C Company riflemen were able to move forward again to close with the enemy. After several hours of bitter fighting, during which hundreds of mortar rounds were fired, the enemy broke. By 2400 hours the position was clear.

e. The commander later credited the immediate and accurate mortar fire from his weapons platoon with saving the company during those first critical moments. He said the combined fire of the battalion's other mortars and the field artillery "broke the back" of a determined enemy resistance. Because they were organic, the company's mortars were able to deliver fires faster and closer than the artillery. Their fires complemented and supplemented the heavier FA fires.

4-2. MORTAR SUPPORT DURING OFFENSIVE OPERATIONS

Offensive operations are characterized by movement and changing situations. Flexibility in fire support is required to provide continuous fires. The mortar platoon plans to conduct fires en route to the objective, on the objective, and beyond the objective (Figures 4-3 and 4-4).

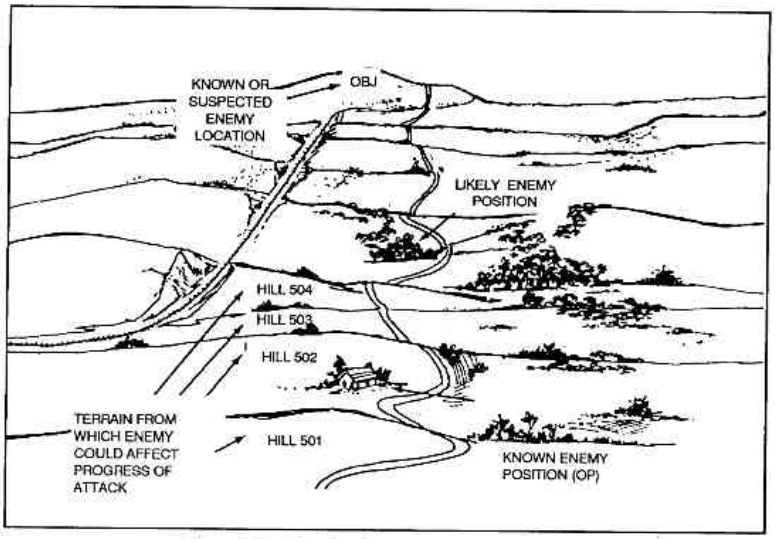

Figure 4-3. Planning fires en route to the objective.

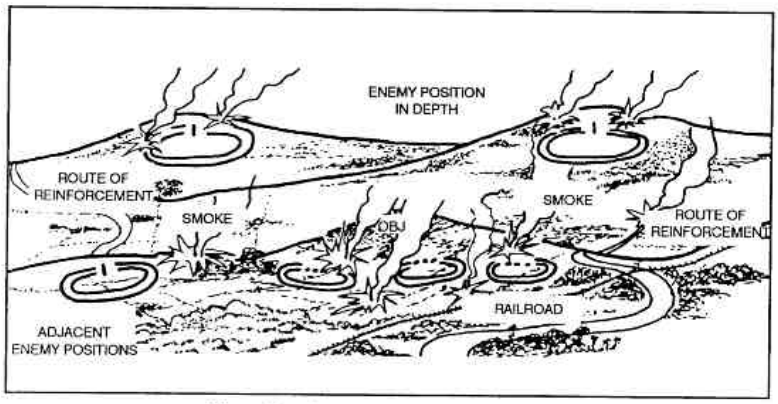

Figure 4-4. Fires on and beyond the objective.

a. Mortars accomplish this by positioning near the LD using the one-half to two-thirds maximum range rule as a guide, and then moving forward. Having mortar firing positions in deep defilade is often more important than the one-half to two-thirds maximum range rule. If a good defilade position is located closer to the LD, it should be used.

b. Mortars provide support during the attack to neutralize, suppress, or destroy the enemy while the assault element moves to the final coordination line, screens friendly movement by obscuring the enemy's vision, neutralizes resistance during the final assault, and isolates the objective.

c. Mortars neutralize and suppress enemy defenses during the final phase of the attack by short, violent preparations targeted against frontline defenses and OPs. Mortar fires are lifted or shifted at the last possible moment before assault elements close on the enemy's position.

d. Once an objective is seized, friendly forces consolidate and prepare to repulse enemy counterattacks or to reorganize with minimum loss of momentum to continue the attack. Mortars protect friendly troops during consolidation or reorganization by preventing enemy reinforcements from entering the objective area or by breaking up enemy counterattacks.

4-3. TYPES OF OFFENSIVE OPERATIONS

There are five major types of offensive operations that mortars can expect to support. In many ways, mortars support each type of operation in the same manner.

a. **Movement to Contact.** Movement to contact gains or reestablishes contact with the enemy to further develop the tactical situation. The exact location of the enemy is usually not known.

(1) Mortars provide the maneuver commander the most responsive means of indirect fire support during a movement to contact. The displacement techniques used by a mortar platoon during this operation depend on the distance to be traveled, the likelihood of enemy contact, and or the maneuver commander's guidance. For example, if the objective in a movement to contact is distant, the entire mortar platoon can be directed to displace, moving close behind a maneuver element, depending on where enemy contact is expected. While the mortar platoon, section, section (-), or squad is displacing, it must be prepared to immediately engage targets using direct-lay, direct-alignment, or hip-shoot techniques of engagement.

(2) Fire planning on key terrain and likely enemy positions increases mortar responsiveness upon enemy contact. It must include possible targets en route to the march objective, on the march objective, and beyond. Once enemy contact is made, the mortar platoon leader quickly issues a FRAGO to support the maneuver element's hasty attack or bypass.

(3) Not only must the commander plan mortar fires, but he must also plan mortar movement. The mortar platoon can be attached, for movement, to a company near the front of the battalion march column or tactical formation. This will ensure that the mortars are close enough to the enemy to contribute responsive, immediate fires (See Figures 4-5 to 4-9 for examples of mortar platoons and sections moving within unit formations.)

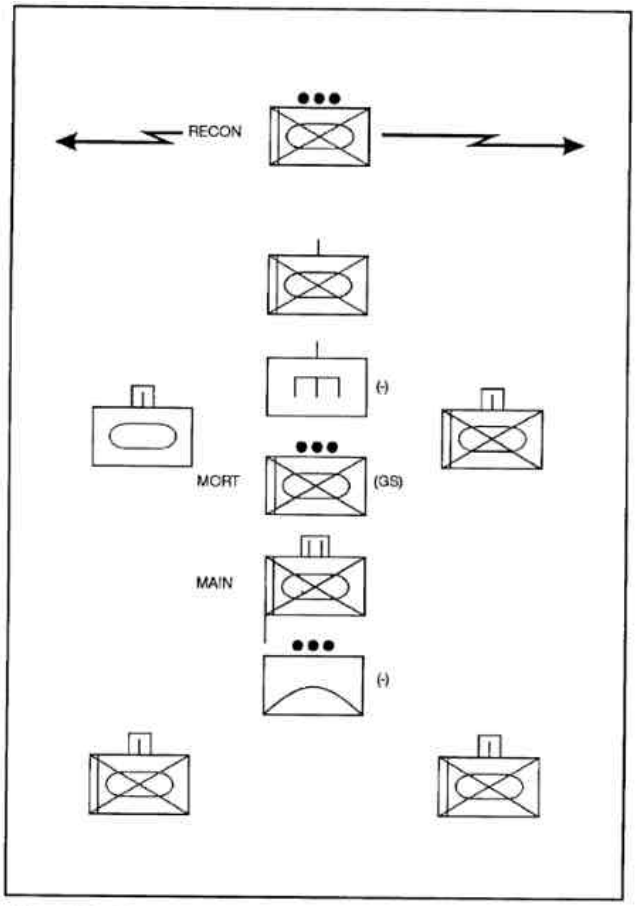

Figure 4-5. Position of battalion mortar platoon (GS) during mechanized task force movement to contact, box formation.

CHAPTER 5

MORTARS IN SUPPORT OF DEFENSIVE AND RETROGRADE OPERATIONS

Defensive operations retain ground, gain time, deny the enemy access to an area, and damage or defeat his attacking forces. A successful defense consists of reactive and offensive elements working together to deprive the enemy of the initiative. The mortar platoon participates in a defense as part of a larger force. Mortars provide the commander with the ability to strike out against the enemy, to regain his initiative and synchronization, and to counterattack by fire. They are an integral part of any defense and can be used for the following:

- **Deceive or divert enemy attention.**
- **Screen friendly maneuver.**
- **Obscure enemy observation and fires.**
- **Neutralize, suppress, or destroy enemy forces.**
- **Fix the enemy in position for a counterattack.**
- **Deprive the enemy of the use of defilade or decisive terrain.**
- **Illuminate the battlefield for more effective friendly fires.**
- **Harass the enemy and interdict his massing of assault forces.**

5-1. DEFENSIVE OPERATIONS

Defense is a coordinated effort by a force to defeat an attacker and to prevent him from achieving his objectives. The immediate purpose of the defense is to cause an enemy attack to fail. The defensive battlefield consists of three areas that are viewed by commanders when planning operations (Figure 5-1). The mortar platoon leader is not concerned with all three areas at the same time; however, he must understand the defensive framework. The mortar platoon leader can expect to be involved in one area at a time but may provide support in overlapping areas. (For details on the defensive framework see FM 7-20 and FM 71-2.)

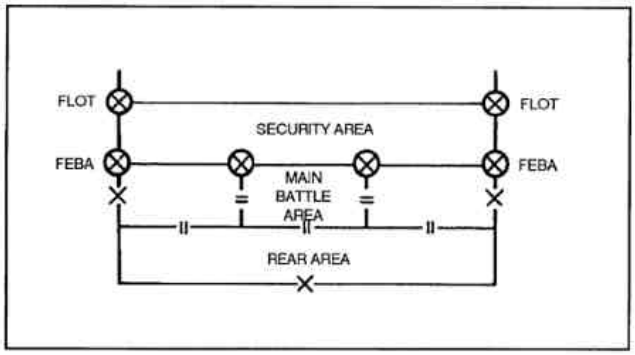

Figure 5-1. Three areas of defensive framework.

5-2. PRIORITY OF FIRES AND PRIORITY TARGETS

The commander routinely modifies indirect fire support by assigning priority of fires to one of his subordinate commanders or by establishing a sequence priorities of fires. These priorities of fires permit the rapid, flexible shifting of fires as the tactical situation develops. In the defense, priority of fires is normally given first to the company that can best place effective long-range fires on the enemy. As the enemy continues to advance, the priority of fires may be shifted to the company responsible for defending the most dangerous avenues of approach into the battalion's sector or battle position. If more than one company is positioned to cover the same avenue of approach (for example, around an engagement area), priority of fires should be given to the company or platoon that can best observe and place effective fire on the enemy forces that pose the greatest threat. As the battle develops, the priority of fires may be changed. To ensure that the most threatening enemy forces are fired on first, the commander must prioritize anticipated demands but may intervene to modify his guidance. The mortar platoon leader must stay in contact with the TOC and the battalion FSO to quickly change priorities of fires when needed.

a. **Priority of Fires.** Priority of fires are normally assigned to a forward security force, which may be the scout platoon, or to another maneuver force given a security or a counterreconnaissance mission. It can be subsequently assigned to weight a critical sector or battle position.

(1) The commander may shift the priority of fires to meet the threat, as required. He can assign priority of mortar fire to increase the effectiveness of direct fires. For example, the effectiveness of TOW and Dragon missiles can be increased by having mortar fire obscuring enemy overwatch elements, forcing enemy armor to button up, suppressing accompanying infantry, and canalizing the enemy.

(2) Priority of fires is assigned to a counterattacking force upon initiation of the counterattack.

b. **Priority Targets.** Priority targets are used to increase fire support responsiveness on specific targets or specific high threat areas. In addition to artillery priority targets that may be allocated to him, the battalion commander has one or two mortar priority targets he can allocate. The company commander has one priority target he can allocate. Only mortar platoons with six mortars can be allocated two priority targets, one for each section, and still provide adequate target coverage and results. Medium mortar platoons and light mortar sections cover only a single priority target. The company commander indicates his priority target in the REMARKS column of his target list. Anticipated changes of the priority target are indicated as ON-ORDER PRIORITY TARGETS on the same target list.

(1) The battalion commander and FSO must carefully consider priority targets before assigning them. Priority targets should lie in the sector of the company or platoon having priority of fires. This prevents any confusion if the mortar platoon receives several calls at the same time. If a conflict is possible (such as when the scout platoon has priority of fires, yet a priority target has been allocated to a rifle company), the commander, FSO, operations officer, and mortar platoon leader must coordinate to avoid confusion.

(2) Priority targets are not always fired on using HE ammunition. Illumination, smoke, or a mix of HE and WP can be used as the designated rounds to be fired. During darkness, one mortar within the section can be designated to fire illumination only.

(3) With the exception of FPF, priority targets have a predetermined amount of ammunition set aside to be fired on them. At the maximum rate of fire, the mortar section fires this ammunition immediately upon the observer's call for fire. The FDC then orders the section to repeat the mission, shift fires, or cease fire, based on the message from the observer.

c. **Final Protective Fires.** FPF are preplanned barriers of both direct and indirect fires designed to protect friendly troops from an enemy dismounted assault. They are the highest type of priority targets and take precedence over all other fire requests. The FPF differ from a standard priority target in that they are fired at the maximum rate of fire until the mortars are ordered to stop or until ammunition is depleted. Because mortar rounds are smaller than DS artillery rounds, they can be targeted closer to friendly forces and still be safe. Closer FPF are easier to integrate into direct-fire FPLs. The high rate of fire achievable by mortars creates effective barriers of fire. The allocation of FPF is identical to the allocation of priority targets (one for each battery and one for each mortar platoon). While firing FPF, mortar sections are not normally allowed to cease fire and displace due to countermortar fire. They must take precautions to avoid or withstand countermortar fire (see Chapter 7).

(1) A mechanized or armor battalion commander may direct the six-gun heavy mortar platoon to prepare 2 three-gun FPF. He should do this only if the terrain dictates the need for more FPF than he has been allocated and then only after

seeking additional artillery allocations. The heavy mortars should otherwise fire FPF as a platoon (see Table 5-1).

SIZE	TYPE	NUMBER OF MORTARS	APPROXIMATE WIDTH (METERS)	APPROXIMATE DEPTH (METERS)
120-mm	M120	6 (platoon)	360	60
120-mm	M120	3 (section)	180	60
107-mm	M30	6 (platoon)	240	40
107-mm	M30	4 (platoon)	160	40
107-mm	M30	3 (section)	120	40
81-mm	M29A1	4 (platoon)	140	40
81-mm	M29A1	3 (section)	100	40
81-mm	M252	4 (platoon)	150	50
60-mm	M224	2 (section)	60	30

Table 5-1. Normal FPF dimensions for each number of mortars.

(2) The company commander is responsible for the precise location of the mortar FPF and FPF integration into the direct fire FPLs. The FDC plots and precomputes all firing data for the FPF as early as possible.

(3) The mortar FPF widths from Table 5-1 are neither precise or restrictive. The mortar sheaf can be opened or closed to cover the specific terrain on which the FPF is located. Table 5-1 is derived from data on the bursting diameter of mortar rounds, extracted from various sources. In the past, many publications have mistakenly used the term bursting *radius* while providing the actual distance of the bursting *diameter*. The bursting diameter of an HE round is twice the distance from the point of impact at which the round will reliably place one lethal fragment per square meter of target. The following mortar lethal bursting diameters are estimations since the type round, fuze, range, and target surface all affect the mortar's lethal bursting diameter:

- M120 (120-mm) mortar--60 meters.
- M30 (107-mm) mortar--40 meters.
- M252 (81-mm) mortar--38 meters.
- M29A1 (81-mm) mortar--35 meters.
- M224 (60-mm) mortar--30 meters (M720 round); 20 meters (M49A4 round).

(4) Artillery FPF are allocated to companies in the most critical defensive positions. Mortar FPF may be allocated to cover less critical avenues of approach that are in the same sector or in a different sector. Once allocated to a company,

that commander designates the precise FPF location where they can best augment the direct-fire weapons. Figure 5-2 shows how mortar FPF are positioned to integrate them into the direct-fire FPLs of the defender.

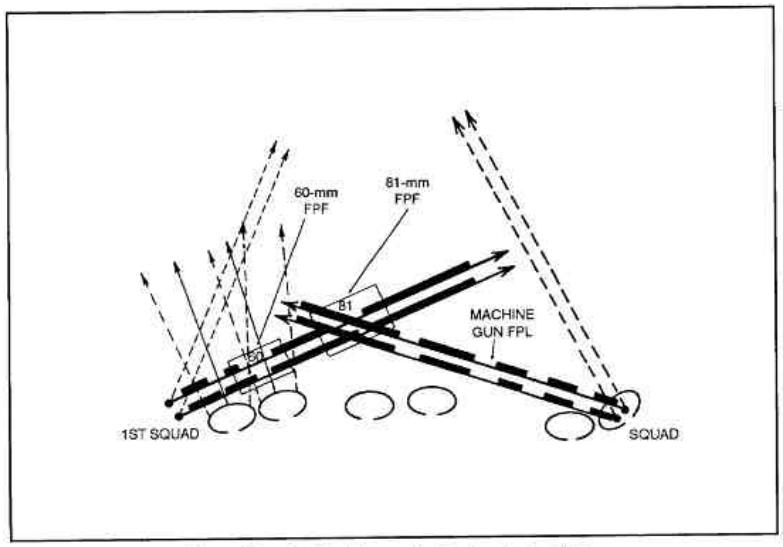

Figure 5-2. Positioning mortar final protective fires.

(5) Mortar FPF are always targeted on an avenue of likely dismounted attack. They can be any distance from the friendly position that fits into the ground commander's tactical situation but are always within the range of organic direct-fire weapons, normally within 100 to 400 meters of friendly troops. The importance of accurate defensive fires and the danger close situation means that each mortar firing the FPF must be individually adjusted into place normally using delay fuze settings and the creeping method of adjustment.

(6) The company commander may retain the authority to call for the mortar FPF to be fired, or he may delegate it to a platoon leader. If the decision is delegated to the forward platoon leader, he may direct his FO to transmit the request to fire the FPF directly to the FDC or through the company FSO. When the request is transmitted directly to the FDC, the rifle platoon leader informs the company commander. The mortar section or platoon leader always informs the commander when he initiates firing the FPF.

(7) The commander and mortar platoon leader must have alternate means of communication to call for the FPF. No one means of communication, radio, wire, or voice is sufficient--an alternate means must be established. In addition to

standard voice messages, the commander and mortar platoon leader should establish a simple visual pyrotechnic signal.

(8) Mortar FPF are fired only when needed. Once begun, FPF are fired until ordered terminated or until all mortar ammunition is gone. HE ammunition with PD fuzes is normally used in firing the FPF. When planning FPF, the mortar platoon leader decides how many rounds to prepare, based on ammunition available and the CSR, and sets them aside for use. This allows the mortars to quickly begin the FPF and maintain them without halting to prepare rounds when the call for fire is received. Additional rounds can be prepared during the firing of FPF if the ammunition requirement exceeds the quantity prepared.

5-3. MORTAR DEFENSIVE FIRE SUPPORT TASKS

In the defense, the mortar platoon leader must understand the intent of the defensive techniques the commander desires to employ. These techniques affect how the mortar platoon provides support, since specific actions and techniques vary depending on the characteristics of the defense.

a. Mortar fires are used in the defense against both mounted and dismounted enemy forces.

(1) Against a mounted attack, they are used to suppress--

(a) Armored forces by using proximity-fuzed HE rounds to cause tanks and fighting vehicles to button up, reducing their effectiveness.

(b) Antiarmor guided missile systems while friendly maneuver units are displacing.

(c) Enemy direct-fire overwatch positions, mainly those of unprotected systems such as T-12 antitank guns.

(d) Air defense vehicles.

(e) Enemy mortars and AGS-30 automatic grenade launchers.

(2) Against a dismounted attack, they are used--

(a) To engage dismounted enemy infantry beyond direct-fire weapon ranges.

(b) To break up enemy troop concentrations.

(c) To cover dead space in front of friendly positions.

(d) To reduce the enemy's mobility and to canalize his assault forces into engagement areas.

(e) To neutralize and destroy enemy forces attempting to breach friendly obstacles.

(f) To suppress and obscure enemy direct-fire support weapons, including laser weapons.

(g) To provide close-in FPF against the enemy's dismounted assault.

(h) To deny the enemy the use of a specified piece of terrain.

(i) To conceal friendly obstacles from the attacking force.

(3) Against both the mounted and dismounted attacks, mortar fire is used--

(a) To screen movement of friendly forces between firing positions.

(b) To isolate attacking enemy units.

(c) To illuminate areas where enemy forces are known or suspected to be, so they can be engaged with other weapons.

(d) To mark targets for attack by direct-fire weapons or aircraft.

b. Mortar fires are often used to support security forces. The security forces can be given priority of mortar fires, operational control of the mortar platoon (or section), or even attachment. The mortar fires are used to engage the advancing enemy at long ranges, to inflict casualties, to delay and disorganize his movements, and to assist the security force in breaking contact. If the mortar platoon or section moves forward of the main defensive positions to accomplish these tasks, the leader coordinates the subsequent rearward displacement. He confirms the timing of the displacement, changes in OPCON or fire priority, the routes of displacement, the passage point through the friendly barriers, recognition signals, and the plan for occupying the subsequent position.

c. Closely coordinated mortar fire can increase the effectiveness and survivability of antitank weapons significantly. The antitank company commander can be given priority of mortar fires or even OPCON of a mortar platoon or section. Antitank company commanders rarely have mortar squads attached to the company. The antitank company does not have a company FSO. An FSO or FO team can be task-organized. However, the mortar platoon leader and the antitank company commander must be prepared to coordinate and execute fires in support of antiarmor companies without a FIST. Since both sections and platoons are organic to the same battalion, this is easily accomplished. Mortar sections and platoons support the antiarmor battle in many ways.

(1) The HE fires force tank crews to button up. This reduces their field of view and their ability to detect friendly forces. Mortar rounds should be set to achieve airbursts to reduce the amount of dust and dirt thrown into the air. This interferes less with friendly direct fires.

(2) Mortar smoke rounds can be fired to isolate the lead element of an advancing enemy force from the main body. The antitank company can then attack this isolated element, free from enemy overmatching fires. Mortar smoke can be placed between the antitank company and the enemy to aid in the movement out of initial firing positions to subsequent ones. All commanders involved must coordinate the use of mortar smoke rounds. Also, the mortar platoon leader must be prepared to cease firing smoke rounds *immediately* if shifting winds move the smoke to an unfavorable area.

(3) Smoke and HE rounds can be used to complement the effects of antiarmor ambushes and to cover the withdrawal of the ambushing force.

d. The mortar platoon's or section's primary task during defensive operations is to provide immediate, close, and continuous HE fires to the defending force. This is especially critical during "defend to retain" missions. A mortar section will often be placed in DS of a company or platoon defending to retain a battle position or strongpoint.

e. Fires delivered before the enemy attack are designed to breakup the attack before it starts or to disorganize, delay, and weaken the attack. These fires are categorized as follows:

(1) ***Harassment and interdiction fires.*** Ammunition resupply constraints severely restrict the amount of harassment and interdiction fires mortar platoons or sections provide. In a high threat environment, harassment and interdiction fires can expose the mortar firing location to enemy target location and counterfire. Against a dismounted enemy on close terrain, mortar platoons may fire large amounts of harassment and interdiction fires to slow and disorganize the enemy as he concentrates forces and supplies to continue his offensive. Mortar harassing fire can severely limit the enemy in preparing battalion and regimental OPs and in laying wire lines. If the enemy must move men and supplies through a defile or across a ford, interdiction fire can severely hamper reinforcement and carving parties. Mortar harassment and interdiction fires are usually unobserved, and they require extensive coordination to ensure accuracy and safety. Some may be fired based on recurring patrol reports, aerial sightings, or sensor alerts. Close coordination with field artillery survey teams and target locating radars can greatly increase the effectiveness of mortar interdiction fires.

(2) ***Planned defensive targets and targets of opportunity.*** Defensive fires are planned on all known, likely, and suspected enemy locations. This does not mean that an unmanageable number of targets are planned. Known enemy locations are the first priority, followed by suspected and then likely. As enemy forces appear

near planned targets, mortar fire is delivered on them. Targets of opportunity that appear suddenly are engaged by shifting fires from planned targets.

(3) ***Counterpreparation fires.*** These are prearranged fires delivered when an enemy attack is imminent. Since the mortar's range is limited (compared to artillery), artillery fires most of the counterpreparation fires. Mortar platoons and sections may fire against enemy forces that are massing near friendly forward positions. Mortar smoke can be fired to obscure the view from suspected enemy OPs. Mortar illumination can be fired to confirm or deny the presence of enemy forces near defensive positions, while not revealing individual weapon's locations. Mortar platoons or sections may provide most, or all, of the countermortar fires since US mortars outrange most Threat mortars and can hit targets in deep defilade.

f. Once the enemy attack begins, mortar fires are delivered to break up the enemy's formations, to suppress and neutralize supporting weapons, and to destroy as much of the enemy force as possible. Targets in relationship to friendly defensive positions are planned as follows:

(1) In front of the position on all confirmed and suspected enemy locations, on likely avenues of approach, and on prominent terrain features that can be used by enemy overwatch elements.

(2) In front of friendly barriers and obstacles. These fires are often critical to the defense. Any obstacle not covered by both direct and indirect fires can be obscured and breached. High explosive with proximity settings can effectively prevent enemy dismounted forces from breaching an obstacle. Mortar fire is preferred for this task since it is always available to the battalion commander. Its use permits the field artillery to concentrate destructive fires against enemy formations backed up behind the obstacle.

(3) On top of the position so that if the enemy penetrates friendly defenses, effective fire can be delivered on him immediately. If the friendly forces are fighting from properly constructed fighting positions, the mortar fire from a proximity-fuzed round, can be placed directly on them to kill the exposed enemy. This is a combat emergency technique since some friendly casualties could still result. Mortar fires planned on friendly positions also aid immediate counterattacks.

(4) Behind friendly positions to provide flexibility to the defense if the enemy surprises the defender by attacking from the rear. They also aid the defender in blunting the enemy penetration, making the counterattack decisive.

g. Fire support for a counterattack is similar to that for the offense, except fire support priorities are divided between the forces still defending and the forces counterattacking.

Mortar platoons may have to provide all or most of the fire support to the defending forces while the artillery supports the counterattack.

5-4. RETROGRADE OPERATIONS

A retrograde operation is an organized movement to the rear or away from the enemy and must be approved by the next higher authority. It may be forced by enemy action or be voluntary. A retrograde operation is characterized by centralized planning and decentralized execution. Unlike the defense, the commander avoids decisive engagement to the extent that maneuver is restricted. A retrograde operation is designed to preserve the integrity of a force until the offense can be resumed. An inherent task is to inflict as much damage on enemy forces as the situation permits. Mortars participate in the retrograde by providing responsive indirect fire support to harass, delay, destroy, suppress, obscure, or illuminate the enemy. (Examples of the types of missions that mortars can expect to fire are listed in the defense section.) Also, the mortar platoon can screen the displacement of the rifle companies and provide deceptive fires to confuse the enemy as to the commander's intent to withdraw or delay.

5-5. MORTAR UNITS SUPPORTING RETROGRADE OPERATIONS

The mortar platoon supporting the delay or withdrawal provides the commander with a quick and effective means to support his maneuver. Mortar fire can be used to screen the movement of friendly units between positions and delay lines, or to suppress enemy weapons so the maneuver platoons can move to break contact without heavy enemy fire. Positioning of ammunition must be planned to allow for an increased use of smoke. Mortar fires may be used to deceive the enemy by maintaining a heavy volume of fire while friendly elements withdraw.

a. Three types of retrograde operations areas follows:

- In the *delay,* space is traded for time. Enemy contact is maintained, but decisive engagement is avoided.
- In the *withdrawal,* the friendly force deliberately disengages from the enemy and moves to the rear. Withdrawal usually follows a delay and can precede a retirement. A withdrawal can be made with or without enemy pressure.
- In the *retirement,* the friendly force is not in contact with the enemy and moves to a secure area.

b. In a delay or withdrawal, the mortar platoon plans its displacement so that it is in position to fire when needed. When and how to displace is based on how far the mortars are behind the forward units, how far to the rear those units will move, and the intensity of enemy contact. The platoon usually displaces by section.

c. In the withdrawal, the mortar platoon can be effective when employed in support of the security force. Employing mortars in split sections allows the mortars to be used in the deception plan and to support withdrawing maneuver elements. An effort must be made

to keep mortar fire at the same level during withdrawal to increase the effectiveness of the deception plan.

d. A section or squad can be attached or placed under OPCON of the security force or detachment in contact. If enemy pressure is great, the entire mortar platoon can be employed to support the disengagement.